

Standalone DVR User's Manual
Max 8/16

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7.2.1	Real-time Monitor.....	ERROR! Bookmark not defined.
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7.2.2	PTZ	ERROR! Bookmark not defined.
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7.2.3	Color	ERROR! Bookmark not defined.
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Welcome

Thank you for purchasing our DVR!

This operating manual is designed to be a reference tool for the installation and operation of your system.

Here you can find information about this series DVR, its features and functions, as well as a detailed menu tree.

Before installation and operation, please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1 . Electrical safety

All installation and operation here should conform to local electrical safety codes. We assume no liability or responsibility for any injuries or damage caused by improper handling or installation.

2 . Transportation security

Avoid heavy stress, excess shaking or exposure to water during transportation, storage and installation.

3 . Handle with care

Do not apply power to the DVR before completing installation.

Do not place objects on top of the DVR

4 . Qualified engineers needed

All examination and repair work should be done by qualified service engineers. We are not liable for any problems caused by unauthorized modifications or attempted repair.

5 . Environment

The DVR should be installed in a cool, dry place away from direct sunlight, flammable materials and water.

6. Accessories

Be sure to use all the accessories recommended by the manufacturer.

Before installation, open the package and check that all the below listed components are included:

- One power cable
- One Ethernet cable
- D-SUB25 extension cable (for audio, loop & matrix)
- One remote control (batteries included)
- One USB mouse

Contact your local retailer ASAP if something is missing in your package.

1 FEATURES AND SPECIFICATIONS

1.1 Features

This series DVR has the following features:

- Most competitive price and high cost effectiveness
- H.264 compression algorithm ideal for standalone DVR
- Real-time live display up to 8/16 cameras, 100/120 fps recording for 4CIF
- USB 2.0 and TATA HDD supported
- Pentaplex function: live, recording, playback, backup & remote access
- 4 HDDs supported & CD-RW/DVD-RW supported
- Multiple control methods: front panel, IR remote control, keyboard, USB mouse and network keyboard.
- Smart video detection: motion detection, camera masking, video loss.
- Smart camera settings: privacy masking, camera lock, color setting, and title display
- Pan Tilt Zoom and Speed Dome Control: more than 60 protocols supported - preset, scan, auto pan, auto tour, pattern, auxiliary functions are supported. And with speed dome, 3D intelligent positioning function supported.
- Easy backup methods: USB devices, CD-RW/DVD-RW & network download
- Alarm triggering screen tips, buzzer, PTZ preset, e-mail, FTP upload.
- Smart HDDs Management: non-working HDD hibernation, HDD faulty alarm, Raid function.
- Powerful network software: built-in web server, EPSS. Networking access for remote live viewing, recording, playback, setting, system status, event log, e-mail & ftp function.

1.2 Specifications

System

Main Processor	High performance embedded microprocessor
Operating System	Embedded LINUX
System Resources	Pentaplex function: live, recording, playback, backup & remote access
User Interface	GUI, on-screen menu tips.
Control Device	USB mouse, keyboard, IR remote control, network keyboard.,
Input Method	Numerical/Character/Denotation
System Status	HDD status, data stream statistics, log record, BIOS version, on-line user and etc.

Video

Video Input	8/16 Channel, BNC, 1.0Vp-p, 75Ω; Looping (optional)
Video Output	2-channel TV output BNC, 1.0Vp-p, 75Ω; 1 VGA output;
Video Standards	PAL (625Line , 50f/s) , NTSC (525Line , 60f/s)
Video Compression	H.264

Video Resolution	Format	NTSC	PAL
	D1(4CIF)	704*480	704 * 576
	CIF	352 *240	352 *288
Video Recording	CIF: PAL 1f/s~25f/s	NTSC 1f/s~30f/s	
	D1: PAL 1f/s~6f/s	NTSC 1f/s~7f/s	
Video Display Split	Full and multiple screen display, 1 / 4 / 8 / 9 / 16		
Tour Display	Support		
Image Quality	1~6 level (level 6 is the best)		
Privacy Masking	8 self-defined four-sided zone for privacy masking for each camera		
Camera Lock	Camera locked for users		
Color Adjustment	Adjust color according to different time periods		
Video Information	Camera title, time, video loss, camera lock, motion detection, recording		
TV Output Adjustment	Adjust TV output color & display zone		
Audio			
Audio Input	4 channel, BNC, 200-2800mV, 30KΩ		
Bidirectional Audio Input	1 channel, BNC, 200-2800mV, 30KΩ		
Audio Output	1 channel, BNC, 200-3000mv, 5KΩ		
Audio Compression	ADPCM		
Video Detection & Alarm			
Motion Detection	Zones: PAL 396 (22*18)/NTSC 330(22*15) detection zones Sensitivity: 1~6 (level 6 is highest)		
	Trigger recording, PTZ preset, tour, alarm, e-mail & FTP		
Video Loss	Trigger recording, PTZ preset, tour, alarm, e-mail & FTP		
Camera masking	Trigger recording, PTZ preset, tour, alarm, e-mail & FTP		
Alarm Input	8/16 channel, programmable, ground, manual open/closed		
	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP		
Relay output	6 channel, 30VDC, 1A, NO/NC, form-C,		
Hard Disk			
Hard Disk	4 SATA HDD ports, 4 HDDs supported.		
Space Occupation	Audio : 14.4MB/H Video : 56 ~ 400MB/H		
HDD Management	Hard disk hibernation technology, HDD faulty alarm & Raid (Redundancy)		
Record, Playback & Backup			
Recording Mode	Manual, continuous, video detection (including motion detection, camera masking, video loss), Alarm		
Recording Priority	Manual >Alarm >Video Detection >Continuous.		
Recording Interval	1 to 120 minutes (default: 60 minutes)		
Overwrite Mode	Supported		
Raid Function	Supported		

Search Mode	Time/Date, Alarm, Motion Detection & exact search (accurate to second)
Playback	2-channel playback simultaneously, Play, pause, stop, rewind, fast play, slow play, next file, previous file, next camera, previous camera, full screen, repeat, shuffle, backup selection.
Digital Zoom	Selected zone can zoom into full screen during playback
Backup Mode	Flash disk/ USB HDD/ USB CD-RW/DVD-RW/ built-in SATA Burner/ network download
Network	
Interface	RJ-45 Port (10/100M)
Network Functions	TCP/IP, DHCP, DDNS, PPPoE, E-mail, FTP
Remote operation	Monitor, PTZ control, playback, system setting, file download, log information
Auxiliary Interface	
USB Interface	Two USB 2.0 ports, one for mouse control, one for backup
RS232	Keyboard, PC communication
RS485	PTZ control
Environmental	
Power Supply	220V_50Hz/ 110V 60Hz
Power Consumption	30W/40W
Working Temperature	-10°C~ + 55°C
Working Humidity	10%~90%
Atmosphere Pressure	86kpa~106kpa
Dimension	1.5U, 440x460x68mm (W*D*H)
Weight	6.0Kg
Mounting	Desktop or rack

2 Overview and Controls

This section provides information about the front panel and the rear panel.
Please refer to this section first after installation.

2.1 Front Panel

Please refer to **Error! Reference source not found.** for front panel information.

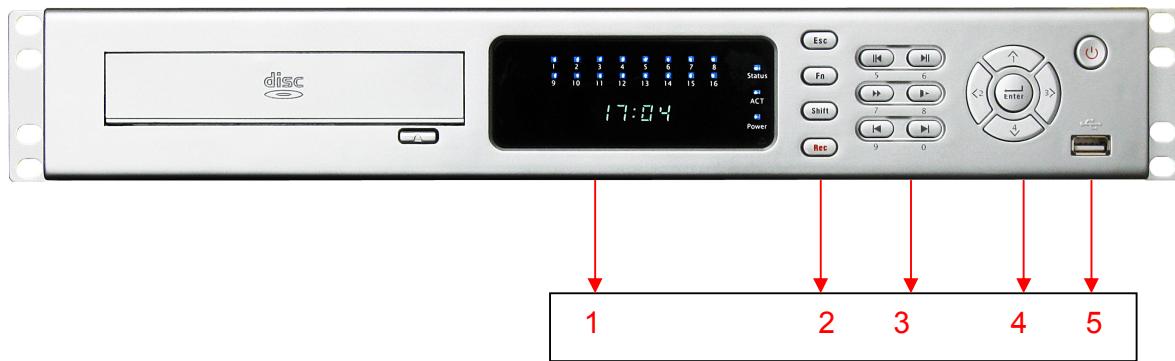


Figure 2-1

SN	Button Name	Icon	Function
1	Channel indication light	1-8 9-16	When system is recording the corresponding channel light become on.
	Standby indication light	Status	When DVR is standing by, this lamp turns on.
	Remote control signal receiver	ACT	To receive signals from remote control.
	Power indication light	Power	The power indication light becomes on after system boots up.
2	Cancel	Esc	Go back to previous menu or cancel current operation in function menu interface.
			In video playback mode, click this button to go back to real-time monitor mode.
	Assistant	Fn	In 1-ch monitor mode: pop up assistant function: PTZ control and Video color
			In motion detection interface, working with direction keys to finish setup.
			Clear: Press Fn for 1.5 seconds to clear all contents in current text box.
			In preview interface (There is no other menu), click this button for 3 seconds to switch between TV/VGA.
			In text box input mode, press this button to switch between numeral/English character (small/capitalized).
			Special combined operation in some menus.
	Shift	Shift	In input mode, switch between numeral/character and other function keys.
			In four-window preview mode, it can work as Fn button.
	Record	Rec	Enable or disable record function manually. In record control menu, working with direction keys to select

			recording channel.
3	Play/pause	▶	In playback mode: play or pause video. In text box: input number 6.
	Reverse/pause	◀	In playback mode: reverse play video. In text box: input number 5.
	Fast play	▶▶	In playback mode: click this button to switch between various fast play speeds and normal playback. In text box: input number 7.
	Slow play	▶▶▶	In playback mode: click this button to switch between various slow play speeds and normal playback. In text box: input number 8.
	Next	▶	In playback mode: play the next video. In text box: input number 0.
	Previous	◀	In playback mode: play the previous video. In text box: input number 9.
4	Direction key	▼ ▲ ◀ ▶	Move cursor In text box: increase or decrease numerals. In dropdown list, modify current setup. In monitor mode, click this button to go to the 1 st channel- or 4 th channel. (Single-channel monitor mode). In text box input mode, press SHIFT and then use up/down key to input number 1 or 4.
			In the main menu or sub-menu interface, click left or right key to move cursor.
			In playback mode: Click left/right key to select correspond option in the function menu.
			In monitor mode, click left/right key to go to 2 nd channel or 3 rd channel (single-window monitor mode)
			In text box input mode, press SHIFT and then use left/right key to input number 2 or 3.
			O.K
	O.K	Enter	Confirm
			Go to the main menu
5	Power button		Boot up or shut down the DVR
	USB port		Connect to USB port

2.2 Rear Panel

2.2.1 Overview

Please refer to Figure 2-2 for real panel information.

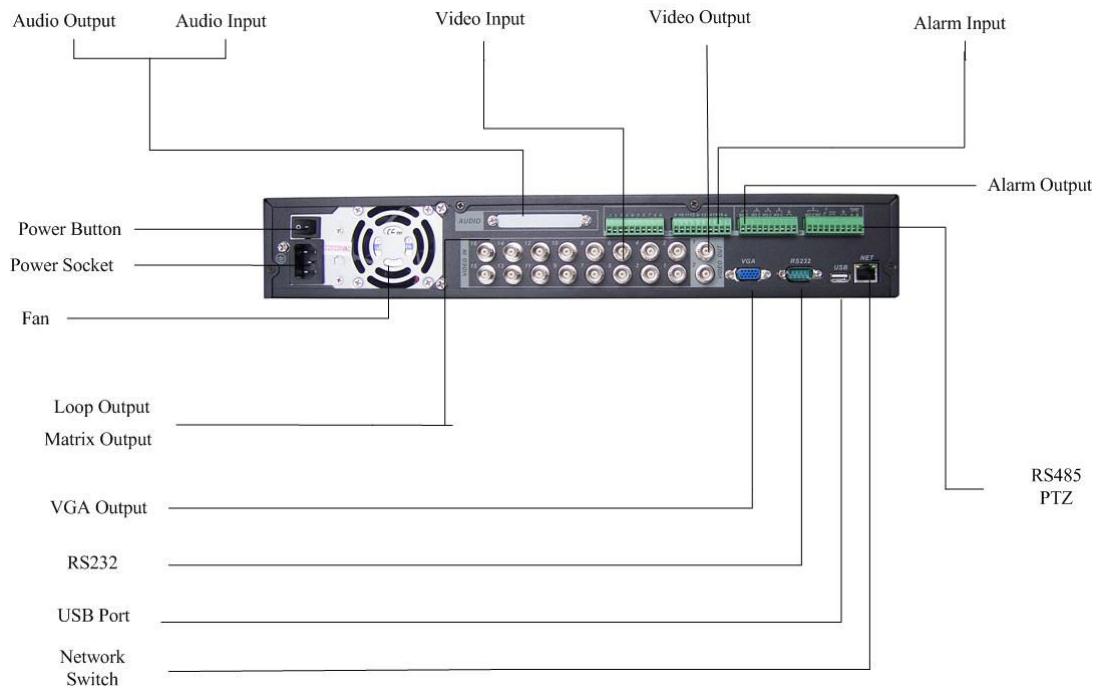


Figure 2-2

2.2.2 Connection Sample

Here is a connection sample for your reference. See Figure 2-3.

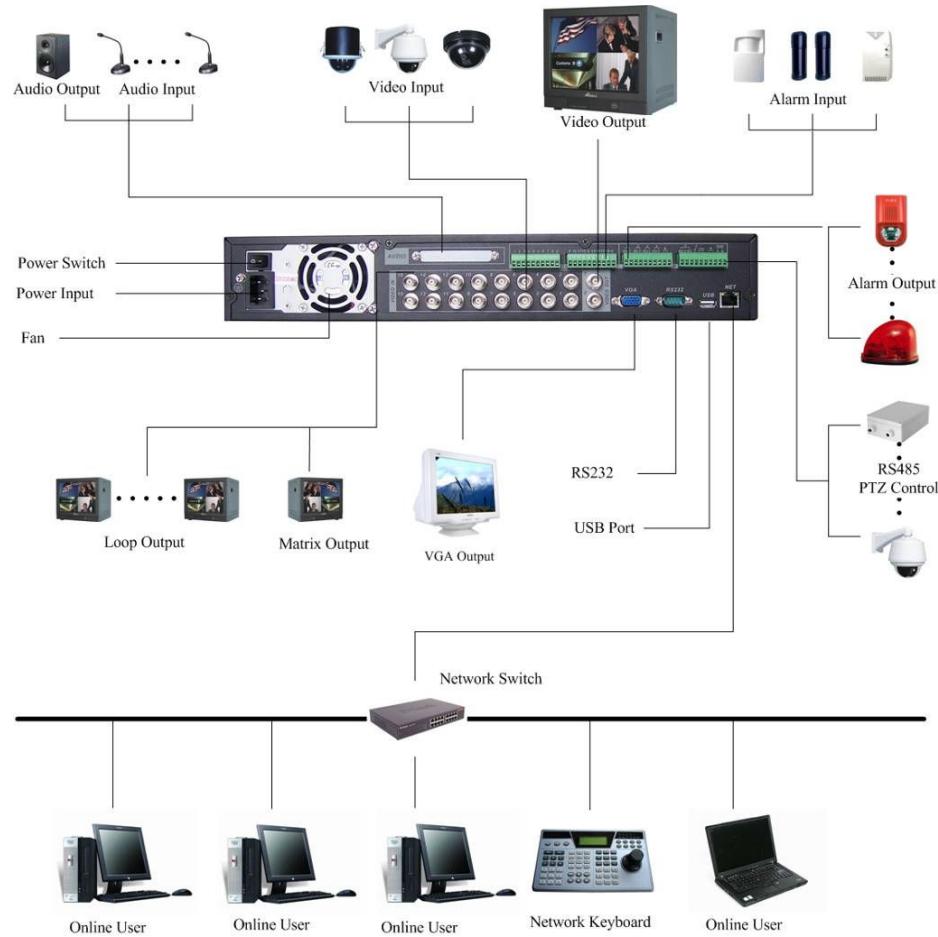


Figure 2-3

2.3 Remote Control

The remote control interface is shown as in Figure 2-4.

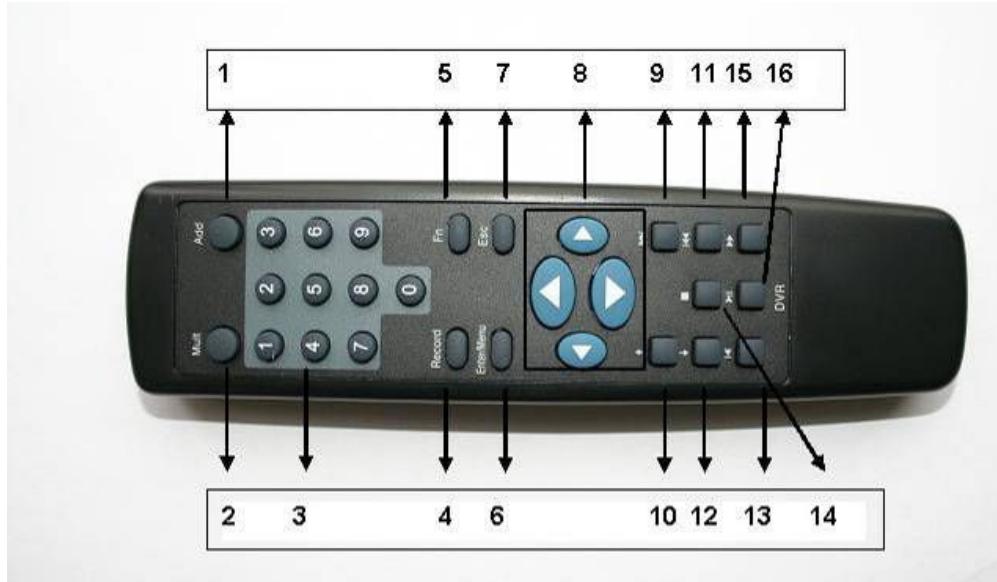
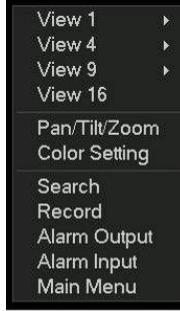


Figure 2-4

Serial Number	Function
1	remote switch
2	Multiple-window switch
3	0-9 number key
4	Record
5	Auxiliary key
6	Confirm /menu key
7	Cancel
8	Direction key
9	forward
10	Previous
11	Back
12	Next
13	Slow play
14	Stop
15	Fast play
16	Play/Pause

2.4 Mouse Control

Left click mouse	In real-time monitor mode, you can go to the main menu.
	When you have selected a menu item, left click the mouse to view the content within that menu.
	Execute the control operation.
	Modify checkbox or motion detection status.
	Expand drop-down menus

	<p>In the input box, you can select different input methods. By left clicking the corresponding button on the panel you can input upper and lower case letters, numbers and symbols. Also note, the _ represents a space, and ← works as a backspace or delete.</p> 
	<p>To input symbols, you can use the corresponding numeral in the front panel. For example, click number 1 to input “/”, or you can click the number in the on-screen keyboard directly.</p> 
Double left click mouse	<p>Implement special control operation such as double click one item in the file list to playback the video.</p> <p>In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.</p>
Right click mouse	<p>In real-time monitor mode, pops up shortcut menu: one-window, four-window, nine-window and sixteen-window, Pan/Tilt/Zoom, color setting, search, record, alarm input, alarm output, main menu. Among which, Pan/Tilt/Zoom and color setting for the currently selected channel. Also, if you are in the multiple-window access mode, the system automatically switches to the corresponding channel.</p> 
	Exit current menu without saving any changes. Back out of current menu.
Scroll wheel	<p>In numeral input box: Increase or decrease numeral value.</p> <p>Switch the items in the check box.</p> <p>Page up or page down</p>
Move mouse	Control the mouse cursor

Click & Drag mouse	Select motion detection zone
	Select privacy mask zone

2.5 Virtual Keyboard & Front Panel

2.5.1 Virtual Keyboard

The system supports Alphanumeric (upper and lower case) and symbols input. Move the cursor to the text column and you will see the input button pops up on the right. Click that button to switch between numbers and letters. Use > or < to shift between small characters and capitalized characters.

2.5.2 Front Panel

Move the cursor to the text column. Click Fn key and use direction keys to select number you wanted. Please click enter button to input.

3 Installation and Connections

Note: All the installation and operation should conform to your local electric safety rules.

3.1 Check Unpacked DVR

Upon receipt of the DVR from the courier, please check whether there is any visible damage to the DVR appearance. The protective materials used for the package of the DVR can protect most accidental clashes during transportation. Then you can open the box to check the accessories.

Please check the items in accordance with the list on the warranty card. Finally you can remove the protective film of the DVR.

3.2 HDD Installation

3.2.1 Choose HDDs

We recommend Seagate/IBM/Hitachi HDD of 7200rpm or higher.

3.2.2 Calculate HDD Size

You can use 120G-1500G HDD to guarantee higher recording durations.

The formula of total HDD size is:

Total Capacity (MB) = Camera Amount * Recording Hours * HDD Usage Per Hour (M/h)

H.264 compression is ideal for standalone DVRs. It can save more than 30% HDD capacity over MPEG4 part 1. When you calculate the total HD capacity, you should estimate the average HDD capacity per hour for each channel.

For example, for a 4-ch DVR, the average capacity of HDD usage per hour per channel is 200M/h. If you want the DVR to record video 12 hours each day for 30 days, the total space needed on your HDDs is: 4 channels * 30 days * 12 hours * 200 M/h = 288G which requires one 320G HDD or 2 160G HDDs.

3.2.3 HDD Installation

Data ribbons and fastening screws are provided in the accessory box.

Please follow the instructions below to install hard disk.



1. Loosen the screws of the upper cover.



2. Remove the HDD bracket from internal unit.



3. Dismantle the upper HDD bracket.

4. Install the HDD. Note the HDD is placed upside down. make sure bracket is in correct position.

If the HDD amount is less than four, you do not need to install the HDD bracket.



5. Screw the two bracket parts together.

6. Put HDD bracket back and then fix firmly.



7. Loosen the power cable.

8. Connect to the SATA ports and then connect power cord to the HDDs.



9. Place the upper cover back and screw firmly .

After HDD installation, check connection of data ribbon and power cord.

3.3 CD/DVD Burner Installation

For built-in burner, you remove the plastic knockout to install the CD/DVD burner. This series DVR is compatible with various burner brands popular in today's market. You can consult our local technical support or visit our website for more information.

3.4 Desktop and Rack Mounting

3.4.1 Desktop Mounting

To prevent surface damage, please make sure that the rubber feet are securely installed on the four corners of the bottom of the unit.

Position the unit to allow for cable and power cord clearance at the rear of the unit. Please make sure that the air flow around the unit is not obstructed.

3.4.2 Rack Mounting

The DVR occupies 1.5 rack units (1.5U) of vertical rack space.

The hardware necessary to mount the DVR into a rack is supplied with the unit. Use three (3) screws on each side to fix the unit firmly. Make sure the installation environment is below 55°C. Rear doors may be used only on rack columns that are more than 6 inches (15cm) deep. Install the cabinet in ventilated place. Avoid extreme heat, humid or dusty conditions. You can use a soft dry brush to clean opening outlet, cooling fan and etc regularly.

3.5 Connecting Power Supply

Please check the input voltage and device power button is match or not. . We recommend you use UPS to guarantee steady operation, DVR life span, and other peripheral equipments operation such as cameras.

3.6 Connecting Video Input and Output Devices

3.6.1 Connecting Video Input

The DVR automatically detects the video standard (PAL or NTSC) whenever you connect a video input. It accepts both color and black-and-white video.

NOTE:

- Enabling line lock on cameras may cause video distortion. There may be noise in the camera's power source. If video from one or more cameras is distorted, we recommend you disable the line lock on the camera.
- If a video distribution amplifier is installed between the video source and the DVR, do not set the output video level above 1 Vp-p.

To connect each video input:

1. Connect a coaxial cable to the camera or other analog video source.
2. Connect the coaxial cable to the video in connector on the rear panel.

Please refer to Figure 3-1 for more information.

NOTE:

You need to use a BNC installation tool to connect coaxial cables to the rear panel.



Figure 3-1

3.6.2 Connecting Video Output

This section provides information about physically connecting video display devices to the DVR. See Figure 3-2.

If you connect the DVR with a TV monitor or VGA monitor, the DVR can automatically detect the monitor type. Without any output device, by default, the DVR is configured to use a TV monitor. If your application requires a VGA monitor, you have to press “FN2” or Shift on the front panel.

NOTE:

Video output 1 and VGA can't display at the same time. But Video output 2 can display properly with Video Output 1 or VGA.



Figure 3-2

3.7 Connecting Audio Input & Output, Bidirectional Audio, Looping

Video, Matrix

For the 25-pin or 37-pin interface, different models include different functions.

For example, our 16-ch audio/video basic model has 16 audio inputs, 1 audio output, 1 bidirectional audio input. See Figure 3-3.

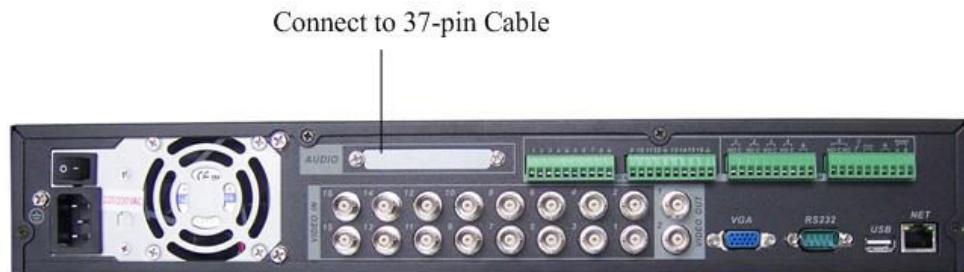


Figure 3-3

3.7.1 Audio Input/Audio Output

Our 16-ch loop matrix and audio/video model has 16 looping video inputs, 1 matrix video outputs, 4 audio inputs, 1 bidirectional audio input, 1 audio output. The DVR encodes audio and video signals simultaneously, which lets you control audio at the monitored location.

To set up audio:

1. Make sure your audio input device matches the RCA input level. If the device and RCA input levels do not match, audio distortion problems may occur.
2. Make sure the audio connector is wired as follows:
3. Connect a line input device or pre-amplified microphone to the audio connector for the video channel on the rear panel.

Please refer to Figure 3-4.

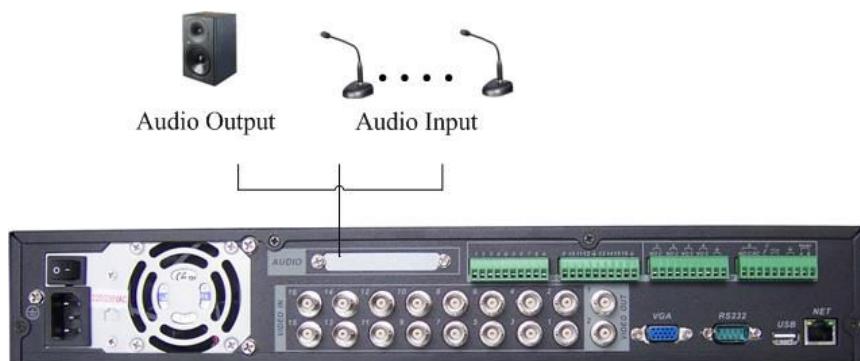


Figure 3-4

Note: some series do not support audio input/output.

3.7.2 Looping video

The DVR supports looping video. It passes the video input to a monitor or other analog video device.

To use looping video:

1. Connect a coaxial cable to the video out connector on 37-pin interface.

You need to use a BNC installation tool to connect coaxial cables to the rear panel.

2. Connect the other end of the coaxial cable to the analog device.

3.7.3 Matrix Video Output

Use video matrix output connector during installation to display video sequentially from each video input. The unit displays each channel for selected seconds. You can use this feature to verify camera installation.

To display video from each connected video source:

1. Connect a video monitor to the video matrix output connector.
2. Turn the DVR on, the monitor, and each video matrix output source.
3. Verify the video from each source and troubleshoot as necessary.

Please refer to Figure 3-5.

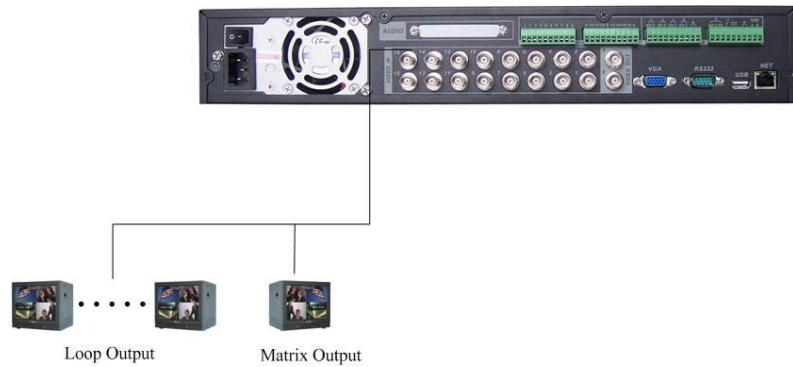


Figure 3-5

3.7.4 Alarm Input and Relay Output

The DVR offers 16 alarm inputs for external signaling devices, such as door contacts or motion detectors. Each alarm input can normally open or normally close. Once configured, an alarm input can invoke many different activities, including triggering a relay device, sending an alert to a security office or store pre-alarm video to the DVR.

3.7.5 Alarm Input

For this series DVR, a grounding signal is needed for alarm input.

If you need to connect two units or one DVR and other device, use a relay to separate them. Please refer to Figure 3-6 for more information.



Figure 3-6

3.7.6 Alarm Output

Do not connect alarm output ports directly with high power loads (no more than 1 A). You can use the co-contactor to realize the connection between the alarm output port and the load. Refer to Figure 3-7 for more information.

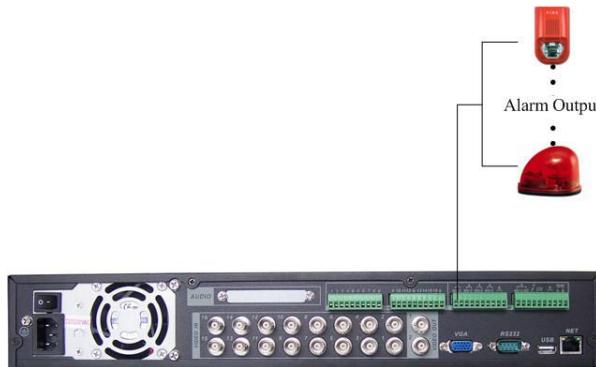


Figure 3-7

3.7.7 Alarm Input and Output Details

You can refer to the following sheet and Figure 3-8 for alarm input and output information.

Parameter	Grounding Alarm
Ground	Ground line
Alarm Input	1, 2, ..., 16
Relay Output	1,2,3,4: NO and C(Normally Open and Com) 5: NO,C and NC(Normally Open, Com, Normally Closed) 6: Ctrl 12V(This is used for reset the sensor)
485 A、B	485 communication port. They are used to control devices such as PTZ. A is RS-485 Positive & B is RS-485 negative
+12 (C)	This should input an external power input.

- 4/8/16-ch grounding alarm inputs. (Normal open or Normal close type)
- Parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).
- Parallel connect the Ground of the DVR and the ground of the alarm detector.
- Connect the NC port of the alarm sensor to the DVR alarm input(ALARM)
- If you need to reset the touched-off alarm remotely, you can use DVR to supply controllable 12 V power to the alarm detector such as the smoke detector.
- Use the same ground with that of DVR if you use external power to the alarm device.

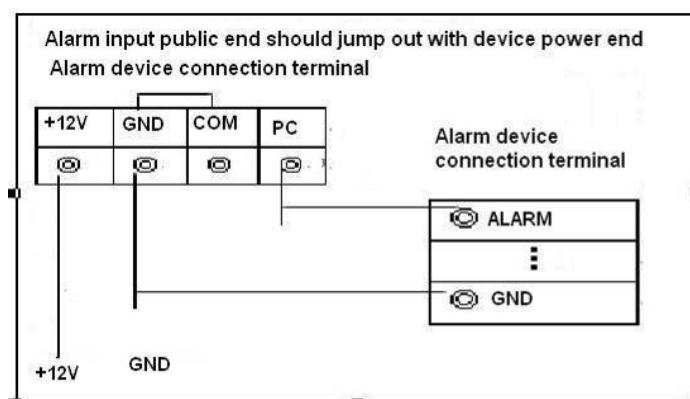


Figure 3-8

3.7.8 Relay Output Description

- 6 ways relay alarm output. Provide external power to external alarm device.
 - To avoid over loading, read the following relay parameters sheet carefully. (See below table)
 - The controllable +12v can be used to restore the smoke detector.
- Please refer to Figure 3-9 for alarm input module information.

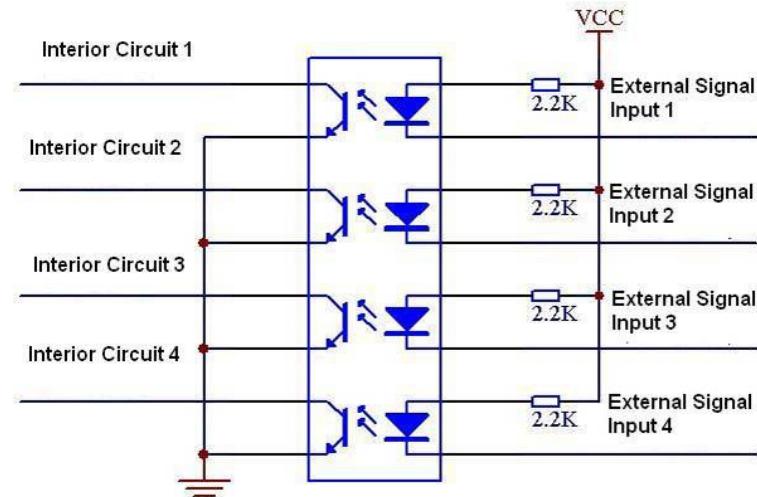


Figure 3-9

Please refer to Figure 3-10 for alarm output module information.

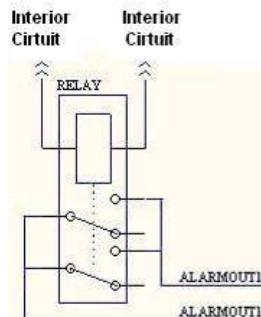


Figure 3-10

Relay Specification

Model: JRC-27F	
Material of the touch	Silver
Rating (resistance load)	Rated switch capacity 30VDC 2A, 125VAC 1A
	Maximum switch power 125VA 160W
	Maximum switch voltage 250VAC, 220VDC
	Maximum switch currency 1A
Insulation between touches with	1000VAC 1 minute 50/60Hz

	same polarity	
	between touches with different polarity	1000VAC 1minute 50/60Hz
	between touch and winding	1000VAC 1minute 50/60Hz
Surge voltage	between touches with same polarity	1500V (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×106 times (3Hz)
	Electrical	200×103 times (0.5Hz)
Temperature	-40°C ~+70°C (-40°F ~ +158°F)	

3.8 RS232

You can connect the DVR with POS (point of sale systems) or Keyboard through the RS232.

With POS systems, the DVR can communicate through RS232 and network. For the POS system, the DVR can integrate the text content and even search the record through the info. The series DVR also support network keyboard operation. You can operate the DVR from the keyboard controls instead of using the control pad on the front panel of the unit.

To connect a NETWORK KEYBOARD to the DVR:

1. Assemble the keyboard according to the instructions in its accompanying installation manual.
2. Connect the keyboard into one of the RS232 ports on the DVR or through network.

3.9 RS485

When the DVR receives a camera control command, it transmits that command up the UTP cable to the PTZ device. RS485 is a single-direction protocol; the PTZ device can't return any data to the unit. To enable the operation, connect the PTZ device to the RS485(A,B) input on the DVR. Since RS485 is disabled by default for each camera, you must enable the PTZ settings first. This series DVR support multiple protocols such as Pelco-D, Pelco-P.

To connect PTZ devices to the DVR:

1. Connect RS485 A,B on the DVR rear panel. A is RS-485 Positive & B is RS-485 negative
2. Connect the other end of the cable to the proper pins in the connector on the camera.
3. Follow the instructions for configuring a camera to enable each PTZ device on the DVR.

3.10 Other Interfaces

There are still other interfaces on the DVR, such as USB ports. You can refer to the Figure 3-11 for more information.

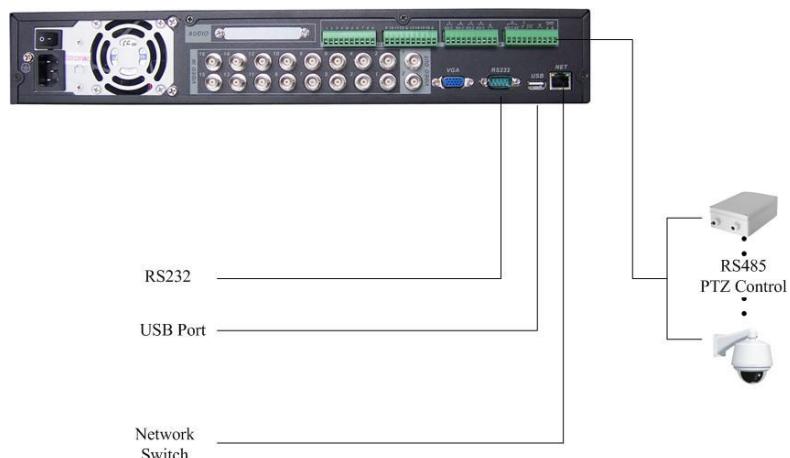


Figure 3-11

4 Overview of Navigation and Controls

Before operation, please make sure you have properly installed HDDs and all the cable connections.

4.1 Login, Logout & Main Menu

4.1.1 Login

When the system boots up, the default video display is a multiple-window view. Click Enter or left click mouse, you can see the login interface. See Figure 4-1.



Figure 4-1

There are 4 default accounts you can use.

- Username: **admin** Password: **admin** (administrator, local and remote)
- Username: **guest** Password: **guest** (low authority user, local and remote)
- Username: **user** Password: **user** (low authority user who can monitor live feed, playbacks, and backups)
- Username: **default** Password: **default** (hidden user – view cameras only)

For your system security, please modify password after your first login.

You can input your password by using the front panel keys, the remote control or a

USB mouse which is recommended. Click **123** to switch between numbers, letters, and symbols.

Note: Three unsuccessful login attempts within 30 minutes will result in system alarm. Five unsuccessful login attempts will result in an account lock.

4.1.2 Main Menu

After you logged in, the system main menu is shown as below. See Figure 4-2. There are total six icons: search, information, setting, backup, advanced and shutdown.

You can move the cursor to highlight the icon, and then left click mouse to enter the sub-menu.



Figure 4-2

4.1.3 Logout

There are two ways for you to shut down. One is from menu option:

In the main menu click shutdown, you can see an interface is shown as below.

See Figure 4-3.



Figure 4-3

There are several options for you. See Figure 4-4.

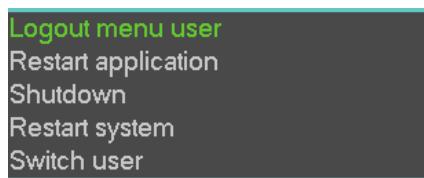


Figure 4-4

The other ways is to press power button on the front panel for at least 3 seconds, system will stop all operations. Then you can click the power button in the rear panel to turn off the DVR.

4.1.4 Auto Resume after Power Failure

The system can automatically backup video and resume previous working status after power failure.

4.1.5 Replace CMOS Battery

Please make sure to use battery model CR-2032. We recommend your replace it regularly (such as once every 2-3 years) to guarantee system time accuracy.

4.2 Recording Operation

4.2.1 Live Viewing

After you logged in, the system is in a live viewing mode. You can see system date, time and channel name. If you want to change the system date and time, you can refer to general settings (Main Menu->Setting->General). If you want to modify the channel name, please refer to the display settings (Main Menu->Setting->Display)

1		Recording status	3		Video loss
2		Motion detection	4		Camera lock

Note: Please refer to the following sheet for channel status. stands for enabled tour function, stands for a disabled tour.

4.2.2 Manual record

Note:

You need to have proper rights to perform the following operations.

4.2.2.1 Manual record menu

There are two ways for you to go to the manual record menu.

- Right click mouse or go to the Main Menu -> Advanced->Manual Record.
- In live viewing mode you can press the record button on the front panel. You can also press record on the remote control.

4.2.2.2 Basic operation

There are three statuses: schedule/manual/stop. Highlight icon “○” to select corresponding channel.

- Manual: the highest priority. After manual setup, all selected channels will begin continuous recording.
- Schedule: channel records as you defined in the recording setup (Main Menu->Setting->Schedule)
- Stop: all channels stop recording.

Note: Manual operation has the highest priority.



Figure 4-5

4.2.2.3 Enable/disable record

Please check current channel status: “○” means it is not in recording status, “●” means it is in recording status.

Use either the mouse or the directional keys to highlight a channel number.



Figure 4-6

4.2.2.4 Enable all channel recording

Highlight below All, to enable recording on all channels.

- All channel schedule record

Highlight “ALL” after “Schedule”. See Figure 4-7.

When the system is in schedule recording, all channels will records as you have previously defined in the schedule interface. (Main menu->Setting->Schedule). The corresponding recording LED on the front panel will turn on.



Figure 4-7

- All channel manual record

Highlight “ALL” after “Manual.” See Figure 4-8.

When the system is in manual recording, all scheduled recordings previously defined will be ignored. You will see the recording LED light on the front panel turn on, and the system will begin manual recording.



Figure 4-8

4.2.2.5 Stop all channel recording

Highlight “ALL” after “Stop”. See Figure 4-9.

The system will stop recording no matter what mode is set in the schedule menu (Main menu->Setting->Schedule)



Figure 4-9

4.3 Search & Playback

4.3.1 Search Menu

There are two ways for you to go to search menu.

- Click Pause/Play, in the remote control.
- Click search in the main menu.

The search screen is shown below

Figure 4-10.

Usually there are three file types:

- R: regular recording file.
- A: external alarm recording file.
- M: motion detection recording file

There are several playback windows. The DVR support 1/2-ch playback

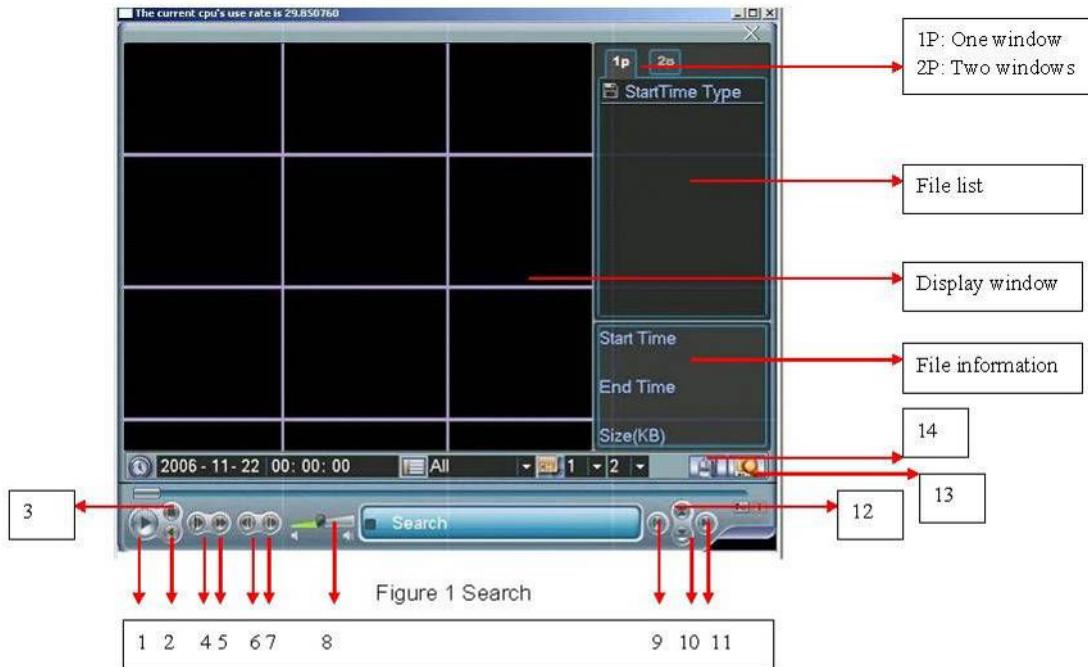


Figure 4-10

Please refer to the following sheet for more information.

Serial Number	Function
1	Play
2	Backward
3	Stop
4	Slow play
5	Fast play
6	Previous frame
7	Next frame
8	Volume
9	Previous file
10	Next channel
11	Next file
12	Previous channel
13	Search
14	Backup

This series DVR supports 2-channel simultaneous playback.

4.3.2 Basic Operation

4.3.2.1 Playback

There are various search parameters: video type, channel number or time. The system can max display 128 files in one screen. You can use page up/down, to view if there are more than one page.

You can double click file name to view the file content.

4.3.2.2 Accurate playback

Input time (h/m/s) in the time column and then click the search button. Your results will appear at the top.

4.3.2.3 Synchronized playback function when playback

During a playback, you can click a number key. The system can switch to the corresponding channel video of the same time.

4.3.2.4 Digital zoom

When the system is in full-screen playback mode you can drag your mouse in the screen to select a section and then left click and drag to digitally zoom in. You can right click to return to your previous view.

4.3.2.5 File backup

You can backup directly from the search menu. You can draw a √ before the file name (multiple choices) and click backup to start the backup process. (Button 14 in

Figure 4-10).

4.3.2.6 Slow playback and fast playback

Refer to the following sheet for slow play and fast playback function.

Button	Illustration	Remarks
Fast play , ►	In playback mode, click this , to switch between various fast play modes such as fast play 1,fast play 2 and more.(Fast play 1 means fast play level 1 or not about speed)	Frame rate may vary due to different DVR versions.
Slow play , ► (Or you can turn the outer ring counter clockwise.)	In playback mode, click this , to switch between various slow play modes such as slow play 1 or slow play 2.	
3、Play/Pause▶	In slow playback mode, click this , to switch between play/pause modes.	
4、Previous/next	In playback mode, you can click ▲ and ▼ to view previous or next video in current channel.	

4.3.2.7 Fast forward/fast backward and frame by frame playback

Special Functions of Shuttle and Jog	Illustration	Remarks
Fast forward(outer ring clockwise)	In playback mode, turn the shuttle (outer ring) clockwise one round to view in fast level 1. Turn it two rounds to get fast level 2. You can continue turning it to get different speeds.	In forward or backward mode, double click Pause/Play, to get normal playback. Frame rate may vary due to different version.
Fast backward(outer ring counter clockwise)	In playback mode, turn the shuttle (outer ring) counter clock-wise one round to play backwards level 1. Turn it two rounds to get backwards level 2. You can continue turning to get different speeds.	
Manual playback frame by frame	In playback mode, click play/pause , slowly turn the jog (inner dial) clock-wise to view frame by frame, counter clock wise to view 1 frame playback.	

4.3.2.8 Backward playback and frame by frame playback

Button	Illustration	Remarks
Backward play ▶◀ in playback interface.	In normal playback mode, left click backward play, system begins backward playback. Double click backward play; again, system goes to pause mode.	When system is in backward play or frame by frame playback mode, you can click play , to go to

Manual playback frame by frame.	Click pause in normal playback mode, slowly turn the jog (inner dial) clock-wise to view frame by frame, counter clockwise to view single frame playback.	normal playback.
---------------------------------	---	------------------

Note:

All the operations here (such as playback speed, channel, time and progress) have relationship with hardware version.

Some series DVRs do not support some functions or playback speeds.

4.3.3 Calendar

Click the calendar icon  in

Figure 4-10. System pops up a calendar for your quick reference. Highlighted dates mean that there are recorded clips. You can click blue date to view file list. In Figure 4-11 you can see there are video files in May 13th and 14th. Double click the date to view file list.



Figure 4-11

4.4 Record Setup (Schedule)

When the system boots up, it is in default 24-hour regular mode. You can set record type and time in the schedule interface.

4.4.1 Schedule Menu

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 4-12.

There are three recording types: R-Regular, MD-Motion detection, A- Alarm.



Figure 4-12

4.4.2 Basic Operation

There are a total six periods. See Figure 4-12.

- Channel: Select the channel number first. You can select “all” if you want to set recording for all of your channels.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Redundancy: This enables the redundancy function. You can highlight Redundancy, to activate this function. Note, before enabling this function, set at least one HDD as redundant.(Main menu->Advanced->HDD Management)
- Record types: There are three types: regular, motion detection (MD) and Alarm.

Please highlight icon  to select the corresponding function.

At the bottom of the menu, there are color bars for your reference. Green stands for regular recording, yellow stands for motion detection and red stands for alarm recording.

After completing all the setups please click save button.

4.4.1.1 Quick Setup

This function allows you to copy one channel setup to another. After setting in channel 1, you can click paste button and turn to channel 2 and then click copy. You can finish setting for one channel and then click save, or you can finish all setup and then click save, to memorize all the settings.

4.4.1.2 Redundancy

Redundancy function allows you to memorize recorded files to one or several disks. These files are created, packaged and closed simultaneously. If there is a drive failure, there will be a spare copy on the other disk. You can use this function to maintain data reliability and safety.

In the main menu navigate from Setting to Schedule. Highlight the redundancy button to enable this function. See Figure 4-12.

In the main menu navigate from Advanced to HDD management and you can assign one or more disk(s) as redundant. You can select from the dropdown list. See Figure 4-13. System auto overwrites old files once hard disk is full.

Please note that only read/write disks or read-only disks can backup a file and support file search function, so you need to have at least one read-write disk; otherwise you can not record video.

Note

About redundancy setup:

- If the current channel is not recording, the current setup will be activated when the channel begins recording the next time.
- If the current channel is recording, the current setup will be activated right away. The current file will be a packet and a form file, then the system will be recording as you have just defined.

After completing all the setups please click save button, system goes back to the previous menu.



Figure 4-13

Playback or search in the redundant disk.

There are two ways for you to playback or search in the redundant disk.

- Set redundant disk(s) as read-only disk or read-write disk (Main menu->Advanced->HDD management). See Figure 4-13. This change will require a reboot. You can now search or playback from the redundant disk.
- Dismantle the disk and play it in another PC.

4.5 Detect

4.5.1 Detect Menu

In the main menu, from Setting to Detect, you can see motion detect interface.

See Figure 4-14. There are three detection types: motion detection, video loss, camera masking.

4.5.2 Motion Detect

Detection menu is shown as below. See Figure 4-14.

- Channel: select the channel you want to configure for motion detection.
- Event type: from the dropdown list you can select the detection type.
- Record Channel: select the channel to activate recording function once the detection occurs. Make sure you have set MD record in the schedule menu (Main Menu->Setting->Schedule)
- Latch: when detection is complete, the auto trigger continues detecting for a specified time. The value ranges from 10-300 seconds
- Region: Select region from Figure 4-15 and you can specify a motion detection zone. There are 396(PAL)/330(NTSC) small zones.
- Sensitivity: Ranges from 1-6. 1 is the lowest and 6 is the highest level of sensitivity.
- Show message: You can choose to pop up a message to alarm you in the local screen.
- Send email: System can send out email to alert you when alarm occurs. .

- PTZ activation: Here you can set PTZ movement when detection occurs. Such as go to preset, tour & pattern when there is an alarm. Click “select” you can see an interface is shown as in Figure 4-16.
- Period: Click set button, you can see an interface is shown as in Figure 4-17. Here you can assign business days or non-business days. In Figure 4-17, click set you can see an interface is shown as in Figure 4-18.
- Anti-dither: Here you can set anti-dither time.
- Alarm output: when alarm occurs, the DVR enables peripheral alarm devices.
- Tour: Here you can enable the tour function when alarm occurs. It is a one-window tour.

Highlight icon  to select the corresponding function. After configurations are made, choose “save” to save and the system will go back to the previous menu.

Note: In motion detection mode, you can not use the copy/paste feature to set channel setup. The recorded video of each channel may not be the same.

In Figure 4-15, you can left click mouse and drag it to set a region for motion detection. Click Fn to switch between active/passive motion detection. After completing setup, please press enter to exit or right click to return to the previous menu

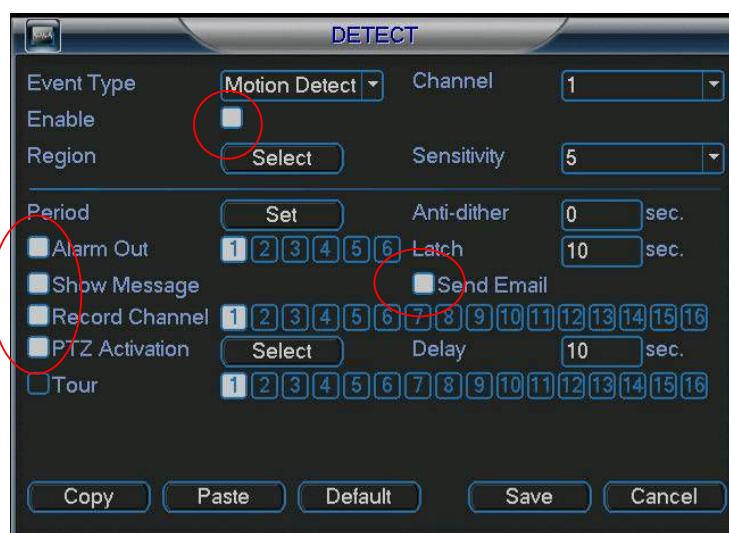


Figure 4-14

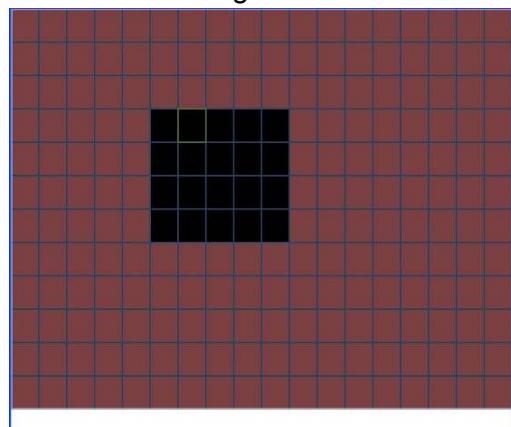


Figure 4-15



Figure 4-16

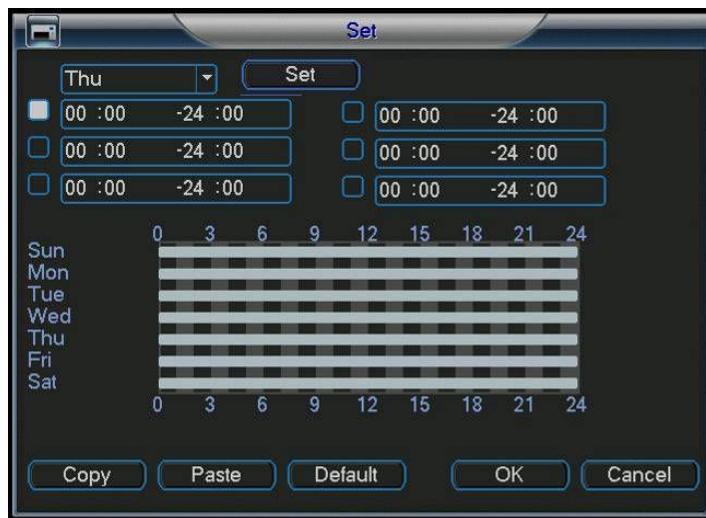


Figure 4-17



Figure 4-18

4.5.3 Video Loss

In Figure 4-14, select video loss from the type list. You can see an interface is shown as in Figure 4-19. This function allows you to be informed when video loss occurs. You can enable alarm output channel and then enable show message function also.

- Channel: select the channel you want to configure for motion detection.
- Event type: from the dropdown list you can select the detection type.

- Record Channel: select the channel to activate recording function once the detection occurs. Make sure you have set MD record in the schedule menu (Main Menu->Setting->Schedule)
- Latch: when detection is complete, the auto trigger continues detecting for a specified time. The value ranges from 10-300 seconds
- Show message: You can choose to pop up a message to alarm you in the local screen.
- Send email: Enables email alerts when detection occurs.
- PTZ activation: Here you can set PTZ movement when detection occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” to see the interface shown in Figure 4-16.
- Period: Allows you to set time periods for detection. See Figure 4-17. Here you can assign business days or non-business days. In Figure 4-17, click set to see the interface shown in Figure 4-18.
- Anti-dither: Here you can set anti-dither time.
- Alarm output: when detection occurs, the DVR enables peripheral alarm devices.
- Tour: Here you can enable the tour function when detection occurs. It is a one-window tour. Please go to chapter 5.3.9 Display for tour interval setup.



Figure 4-19

4.5.4 Camera Masking

When someone viciously masks the lens, the system can alert you to guarantee video continuity or trigger external peripherals. Camera masking interface is shown as in Figure 4-20.

- Channel: select the channel you want to configure for motion detection.
- Event type: from the dropdown list you can select the detection type.
- Record Channel: select the channel to activate recording function once the detection occurs. Make sure you have set MD record in the schedule menu (Main Menu->Setting->Schedule)
- Latch: when detection is complete, the auto trigger continues detecting for a specified time. The value ranges from 10-300 seconds

- Show message: You can choose to pop up a message to alarm you in the local screen.
- Send email: Enables email alerts when detection occurs.
- PTZ activation: Here you can set PTZ movement when detection occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” , you can see an interface is shown as in Figure 4-16.
- Period: Allows you to set time periods for detection. See Figure 4-17. Here you can assign business days or non-business days. In Figure 4-17, click set to see the interface shown in Figure 4-18.
- Anti-dither: Here you can set anti-dither time.
- Alarm output: when detection occurs, the DVR enables peripheral alarm devices.
- Tour: Here you can enable the tour function when detection occurs. It is a one-window tour: Go to chapter 5.3.9 Display for tour interval setup.

Note:

In this interface the copy/paste function is only valid for the same event type. For example, you can not copy a channel setup in video loss mode to camera masking mode.

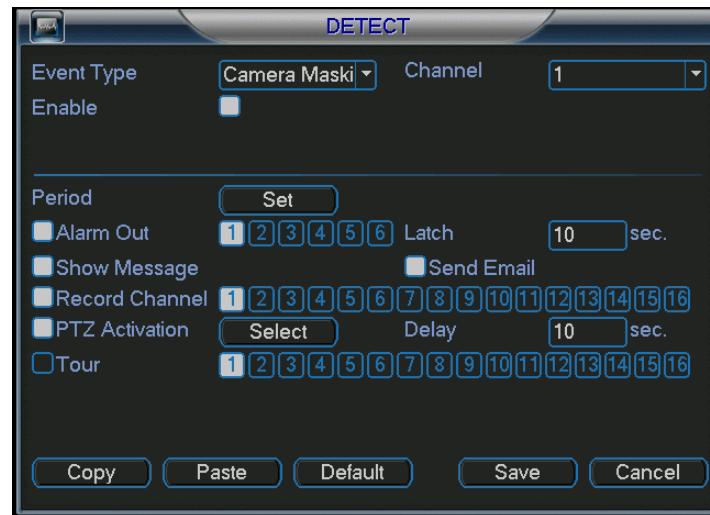


Figure 4-20

4.6 Alarm Setup and Alarm Activation

All alarm devices should be properly connected prior to configuring alarm settings.

4.6.1 Alarm Menu

In the main menu, click Setting then Alarm. You can see an interface is shown as in Figure 4-21.

4.6.2 Alarm setup

Alarm interface is shown as below. See Figure 4-21.

- Alarm in: Select channel number.
- Event type: There are two types: local input/ network input.
- Type: Normal open or normal close.
- PTZ activation: Setup PTZ movement when alarm occurs, such as go to a preset, tour or pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-25.
- Period: Click set button you can see an interface is shown as in Figure 4-23. Here you can set business days and non-business days. In Figure 4-26, click set button, you can see an interface is shown as in **Error! Reference source not found..** Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time.
- Show message: System can provide pop up notifications in the local host screen if this function is enabled.
- Send email: Enable email notifications for alarm occurrences.
- Record channel: you can select proper channel to record alarm video (Multiple choices). At the same time you need to set alarm record in schedule interface (Main Menu->Setting->Schedule) and select schedule record in manual record interface (Main Menu->Advance->Manual Record).
- Latch: This is where you can set proper delay duration. Value ranges from 10 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour: Please go to chapter 5.3.9 Display for tour interval setup.

Please highlight icon  to select the corresponding option. After completing all the setups please click save button, system goes back to the previous menu.

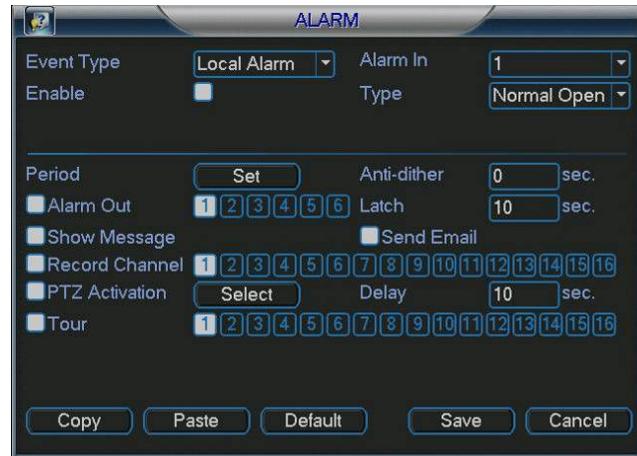


Figure 4-21

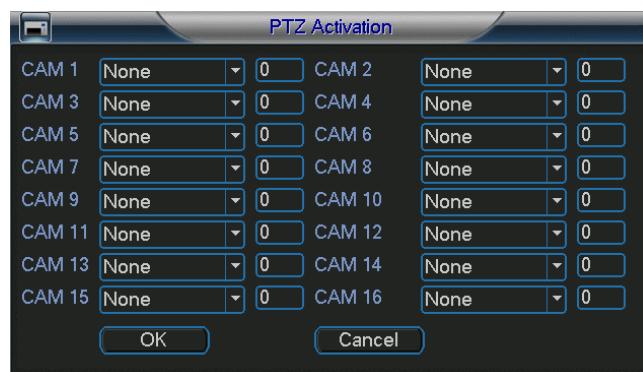


Figure 4-22

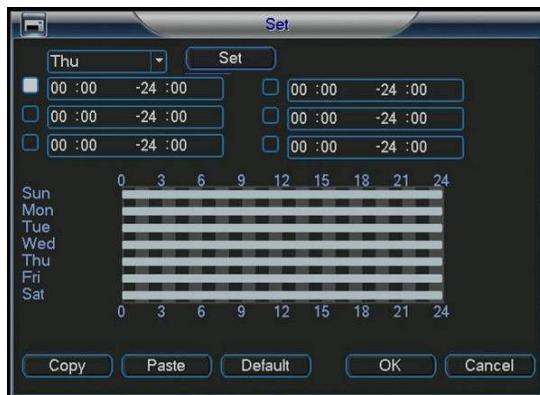


Figure 4-23



Figure 4-24

4.7 Backup

The DVR supports various backup devices such as CD-RW, DVD drives, USB backup and network downloads. Here we will introduce a USB backup first. You can refer to Chapter 7: Web Client Operation for network downloads & backup operations.

4.7.1 Detect Device

Click backup button, you can see an interface is shown as in Figure 4-25. Here is for you to view devices information.

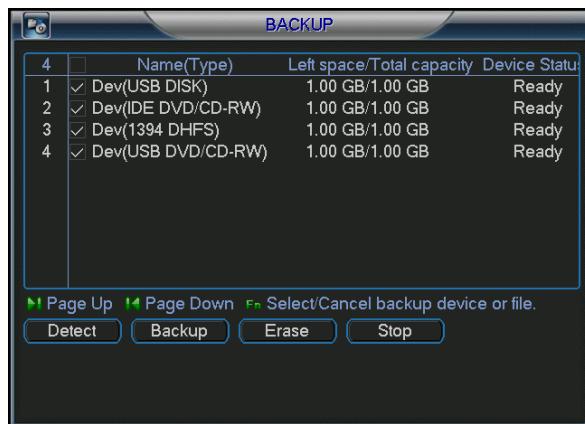


Figure 4-25

4.7.1 Backup

Select your desired backup device first, and then specify your channel & time parameters. Click 'add' to start the search. All files matching the search criteria will populate the list below. The system will automatically calculate the required and remaining space allotted from the selected device. See Figure 4-26.

The system only backup files marked with a √ before the channel name. You can use Fn or cancel to delete √'s after the file serial number.

Click backup button when you're ready to send files to the selected device. There is a progress bar for your reference.

After backup completed, you can see a dialogue box prompting successful backup.



Figure 4-26

Click start button, system begins burning. At the same time, the start button becomes stop button. You can view the remaining time and process bar at the left bottom. See **Error! Reference source not found..**



Figure 4-27

Tips:

During the backup process, you can click ESC to exit the current menu; however, the system will not terminate the backup process.

Note:

When you click stop button during the burning process, there are two conditions for different devices:

- For a CD/DVD burner, the stop function becomes activated immediately and there will be no data burned.
- For a USB device, you will have as much data as processed within the burning time.

The file name format usually is: SN_CH+channel number+time Y+M+D+H+M+S.

In the file name, the YDM format is the same as you set in general interface.

(Main Menu ->Setting ->General). You can visit our website to view listed CD-ROM type.

4.8 PTZ Control and Color Setup

Note: All the operations here are based on PELCO D1 protocol.

4.8.1 Cable Connection

Please follow the procedures below to go on cable connection

- Connect the dome's RS485 cable to the DVR's RS485 port. A is (+)positive. B is (-) negative
- Connect the dome's video output cable to the DVR's video input port.
- Connect power adapter to the dome.

4.8.2 PTZ Setup

Note: The camera video should be in the current screen. Before setup, please check the following connections are correct:

- PTZ and decoder connection is in place. Decoder address setup is right.
- Decoder A (B) line connects with DVR A (B) line.

Boot up the DVR, input user name and password.

In the main menu, click setting, and then click Pan/Tilt Control ., The interface is shown as in Figure 4-28. Here you can set the following items:

- Channel: select the current camera channel.
- Protocol: select corresponding PTZ protocol(such as PELCOD)
- Address: default address is 1.
- Baud rate: select corresponding baud rate. Default value is 9600.
- Data bits: select corresponding data bits. Default value is 8.
- Stop bits: select corresponding stop bits. Default value is 1.
- Parity: there are three options: odd/even/none. Default setup is none.



Figure 4-28

After completing all settings please click save button.

In single window display mode, right click mouse (or “Fn” on the front panel or press “Fn” on the remote control) to highlight pan/tilt/zoom sub menu. See Figure 4-29.



Figure 4-29

Click Pan/Tilt/Zoom, the interface is shown as below. See Figure 4-30.

- Speed: value ranges from 1 to 8.
- Zoom
- Focus
- Iris

Click icon  and  to adjust zoom, focus and iris.



Figure 4-30

In Figure 4-30, click directional arrows (See Figure 4-31) to adjust PTZ position. There are total 8 directional arrows.



Figure 4-31

4.8.3 3D Intelligent Positioning Key

In the middle of the eight directional arrows, there is a 3D intelligent positioning key. See Figure 4-32.

Click this key and the system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.



Figure 4-32

Here is a sheet for your reference.

Name	Function key	function	Shortcut key	Function key	function	Shortcut Key
Zoom		Near	▶		Far	▶▶
Focus		Near	◀		Far	▶
Iris		close	◀◀		Open	▶◀

4.9 Preset/ Patrol/Pattern/Scan

In Figure 4-30, click the “set” button. The interface is shown as below. See Figure 4-33.

Here you can set the following items:

- Preset
- Tour (Patrol)
- Pattern

- Border



Figure 4-33

In Figure 4-30, click page switch button, the interface is shown as in Figure 4-34. Here you can activate the following functions:

- Preset
- Tour (Patrol)
- Pattern
- Auto scan
- Auto pan
- Flip
- Reset
- Page switch



Figure 4-34

Note: The following setups are usually operated in the Figure 4-30, Figure 4-33 and Figure 4-34 .

4.9.1 Preset Setup

In Figure 4-30, use the eight directional arrows to adjust camera to the proper position.

In Figure 4-33, click preset button and then input the desired preset number. The interface is shown as in Figure 4-35.

Now you can add this preset to one tour.



Figure 4-35

4.9.2 Activate Preset

In Figure 4-34, input the desired preset number in the No. field and click preset to activate it.

4.9.3 Patrol setup (Tour Setup)

In Figure 4-33, click patrol. The interface is shown as in Figure 4-36. Input preset number and add this preset to a patrol (tour). For each patrol (tour), you can input max 80 presets.



Figure 4-36

4.9.4 Activate Patrol (tour)

In Figure 4-33, input patrol (tour) number in the No. blank and click patrol.

4.9.5 Pattern Setup

In Figure 4-33, click pattern, and then click "begin" to start the pattern's recording. The interface is shown as in Figure 4-37. Then you can go to Figure 4-30 to modify zoom, focus, and iris.

Go back to Figure 4-37 and click "end" when you are finished with recording the pattern.

Now you can memorize all these operations as pattern 1.

System supports max 255 patterns.



Figure 4-37

4.9.6 Activate Pattern Function

In Figure 4-34, input the desired pattern preset value in the No. field and click pattern to activate it.

4.9.7 Auto Scan Setup

In Figure 4-33, click border button. You can see an interface is shown as in Figure 4-28.

Go to Figure 4-30. Use the directional arrows to select the camera's left limit.

Then please go to Figure 4-38 and click left limit.

Repeat the above procedures to set the right limit.



Figure 4-38

4.9.8 Activate Auto Scan

In Figure 4-34 click Auto Scan to begin the auto scan. Click stop to end the scan. Correspondingly, the auto scan button becomes to stop button. Click stop button to terminate scan operation.

4.10 Flip

In Figure 4-34, click page switch button, you can see an interface is shown as below. See

Figure 4-39. Here you can set auxiliary function.

Click page switch button again, system goes back to Figure 4-30.

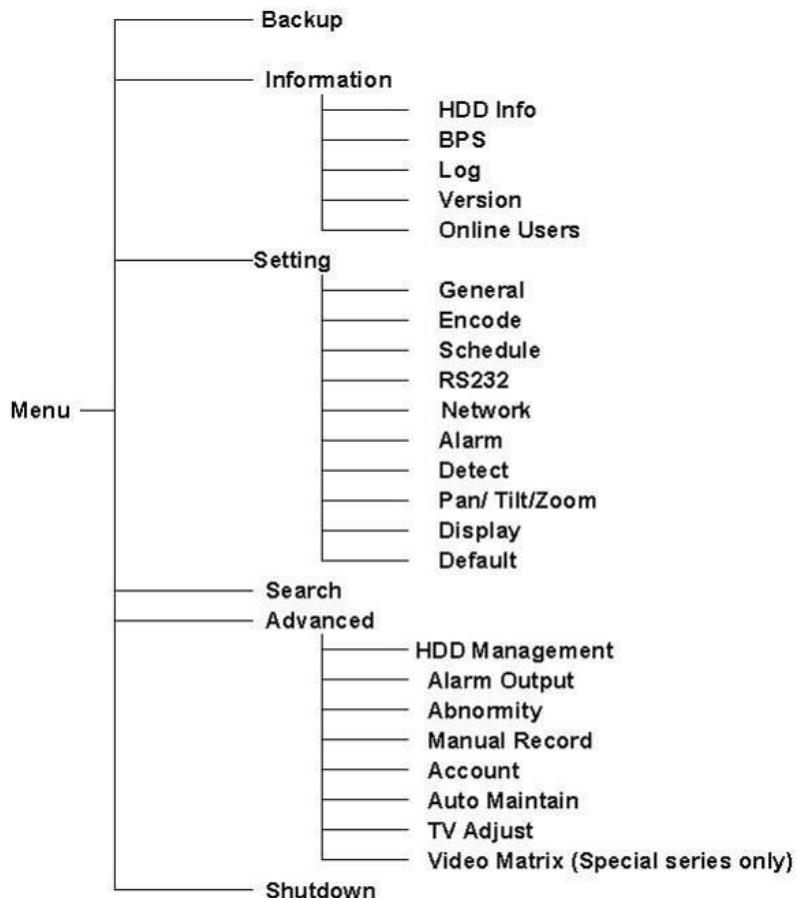


Figure 4-39

5 Understanding the Menu: Operation and Control

5.1 Menu Tree

This series DVR menu tree is shown as below.



5.2 Main Menu

After you are logged in, the system main menu is shown as below. See Figure 5-1 . There are a total six icons: Search, Information, Setting, Backup, Advanced and Shutdown.

Move the cursor to highlight the icon and then left click mouse to enter its sub-menu.

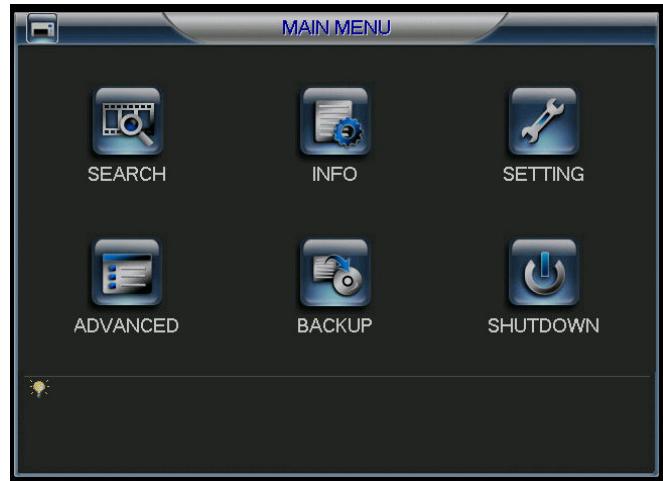


Figure 5-1

5.3 Setting

In the main menu, highlight the setting icon and left click to select. The system setting menu is shown as below. See Figure 5-2.



Figure 5-2

5.3.1 General

General setup includes the following items. See Figure 5-3.

- System time: Set the date and time of the unit.
- Date format: there are three types: YYYY-MM-DD: MM-DD-YYYY or DD-MM-YYYY.
- Date separator: there are three denotations to separate date: dot, line and slash.
- DST: Here you can set DST time and date. Enable the DST function and then click set. You can see an interface is shown as in Figure 5-4. Here you can set the start time and end time by setting the corresponding week setup. In Figure 5-4, click date button, you can see an interface is shown as in Figure 5-5. Here you can set the start time and end time by setting the corresponding date setup.

- Time format: there are two types: 24-hour mode or 12-hour mode.
- Language: system supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight difference maybe found in various series.)
- HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite.
- Pack duration: Here is where you specify the recording duration for each playback file. The default value is 60 minutes.
- DVR No: When you are using one remote control to control several DVRs, you can give a number to each DVR for your management.
- Video standard: There are two formats: NTSC and PAL.
- Auto logout: Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.

Note:

Since system time is very important, do not modify time unless there is a must! After completing all the setups please click save button, system goes back to the previous menu.



Figure 5-3

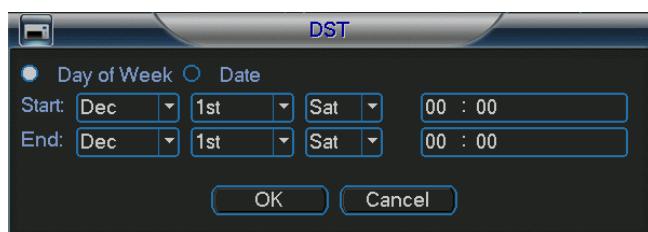


Figure 5-4

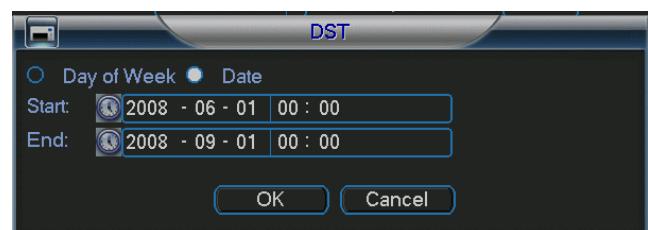


Figure 5-5

5.3.2 Encode

The encode menu includes the following items. See Figure 5-6.

*Note: Some series do not support certain features.

- Channel: Select the channel you want.
- Compression: The system supports H.264. Or you can select from the dropdown list.
- Resolution: The system supports various resolutions, you can select from the dropdown list. For this model, we can support D1/CIF.
- Bit rate: The system supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Frame rate: 1-30 frames per second: 1 f/s, 2f/s, 3f/s, 6f/s, 12f/s, 25f/s. (Some series DVRs only support PAL 25f/s)
- Video/audio: you can enable or disable the video/audio.
- Overlay: click overlay button, you can see an interface is shown in Figure 5-7.
- ◆ Cover area (Privacy mask): Here is for you to set window blanking section. You can drag your mouse to set proper section size.
- ◆ Preview/monitor: privacy mask has two types. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be viewed by the user when system is in monitor status.
- ◆ Time display: You can select whether the system displays time or not when you playback.
- ◆ Channel display: You can select whether the system displays channel number or not when you playback.

System default setup is:

- Channel: 1
- Compression: H.264
- Resolution: CIF
- Bit rate: CBR
- Quality: 6
- Frame rate: 30f/s

Please highlight icon  to select the corresponding function.

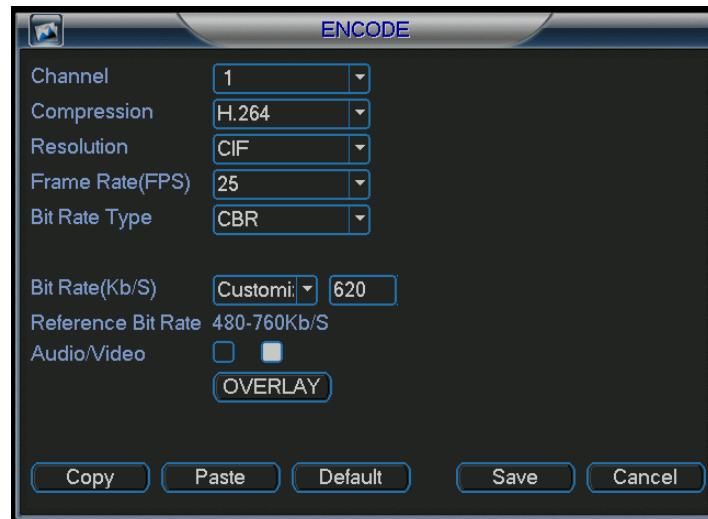


Figure 5-6

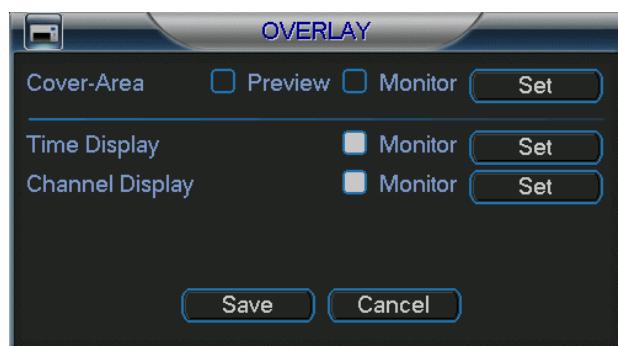


Figure 5-7

5.3.3 Schedule

Please refer to chapter 4.4 schedule.

5.3.4 RS232

The RS232 interface is shown as below. See Figure 5-8

- Function: There are various devices for you to select. The console setting is used to upgrade the device via a serial connection. The keyboard is for you to use a special keyboard to control the device.
- Baud rate: You can select proper baud rate.
- Data bit: You can select proper data bit.
- Stop bit: There are three values: 1/1.5/2.
- Parity: there are three choices: none/odd/even.

After completing all the setups please click save button, system goes back to the previous menu.

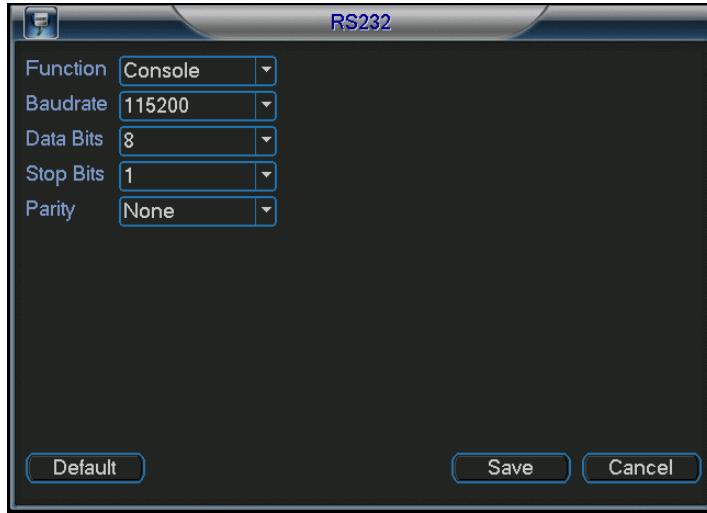


Figure 5-8

5.3.5 Network

This is where you can input network information. See Figure 5-9.

- IP address: Here you can specify an IP address.
- DHCP: Dynamic Host Configuration – The DVR will lease the IP info from any DHCP server on the network. When the DHCP function is enabled you can not modify the IP/Subnet mask /Gateway. If you have not enabled DHCP function you can modify IP/Subnet mask/Gateway. You would need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- TCP port: Default value is 37777. (System server port 37778 is reserved for network UDP use.)
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- Max connection: The system supports a maximum of 10 users. 0 means there is no connection limit.
- Transfer mode: Here you can select the priority between fluency/video qualities.
- Network download: System can process the downloaded data first if you enable this function.

After completing all the setups please click save button, system goes back to the previous menu.

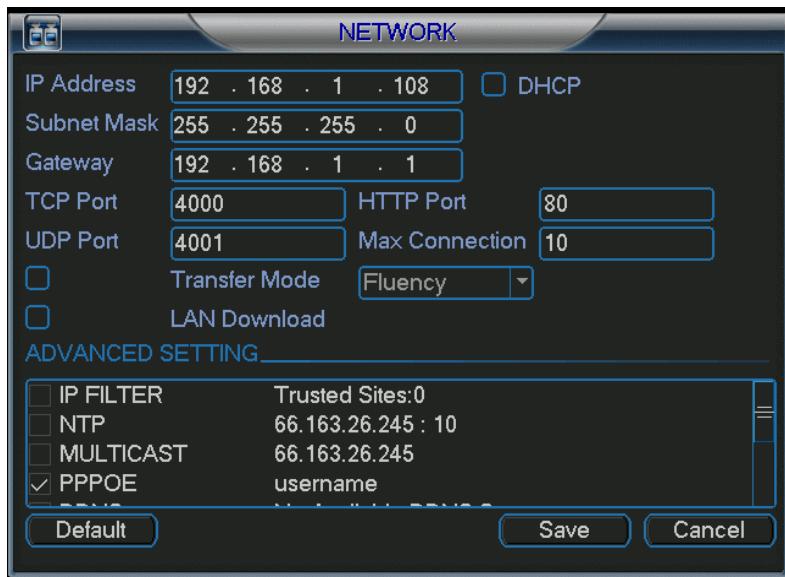


Figure 5-9

5.3.5.1 Advanced Setup

The advanced setup interface is shown as in Figure 5-10. Please draw a circle to enable the corresponding function and then double click the item to go to setup interface.

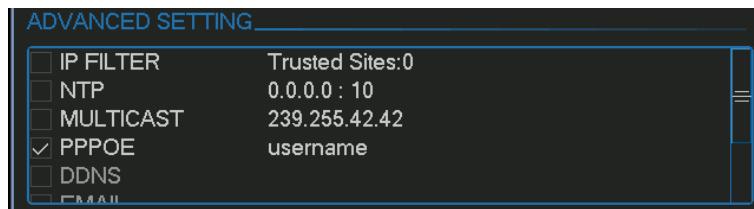


Figure 5-10

5.3.5.2 IP Filter

The IP Filter interface is shown as in Figure 5-11. You can specify individual IP addresses to have access to the DVR. System supports maximum 64 IP addresses. Please note after you enabled this function, only the IP listed below can access current DVR.

If you disable this function, all IP addresses can access current DVR.



Figure 5-11

5.3.5.3 Multiple Cast Setup

Multiple-cast setup interface is shown as in Figure 5-12.

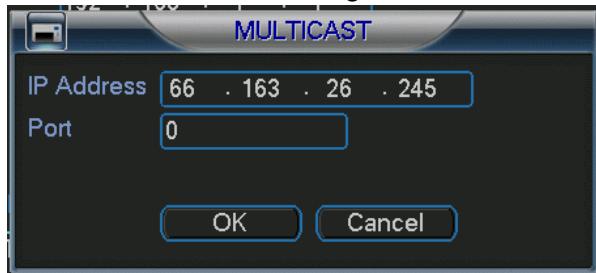


Figure 5-12

Here you can set a multiple cast group. Please refer to the following sheet for detailed information.

- IP multiple cast group address

-224.0.0.0-239.255.255.255

- The higher four-bit of the first byte="1110"

- Reserved local multiple cast group address

-224.0.0.0-224.0.0.255

-TTL=1 When sending out telegraph

-For example

224.0.0.1 All systems in the sub-net

224.0.0.2 All routers in the sub-net

224.0.0.4 DVMRP router

224.0.0.5 OSPF router

224.0.0.13 PIMv2 router

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

- Like the single broadcast address of RFC1918
- Can not be used in Internet transmission
- Used for multiple cast broadcast in limited space.

Except the above mentioned addresses of special meaning, you can use other addresses. For example:

Multiple cast IP: 235.8.8.36

Multiple cast PORT: 3666.

5.3.5.4 PPPoE

The PPPoE menu is shown as in Figure 5-13.

Input "PPPoE name" and "PPPoE password" you get from your ISP (Internet service provider). Click save then restart the DVR to activate your configuration.

After rebooting, the DVR will connect to the internet automatically. The IP in the PPPoE is the DVR's dynamic value. You can then use this IP to access the unit.



Figure 5-13

5.3.5.5 NTP Setup

You will need to install an SNTP server (Such as Absolute Time Server) in your PC first, or, at least have one running on your network.

NTP setup interface is shown as in Figure 5-14.

- Host IP: Input your PC address.
- Port: This series DVR supports TCP transmission only. Port default value is 123.
- Update interval: minimum value is 15(Unit: minute)
- Time zone: select your corresponding time zone here.

Here is a sheet for your time zone setup.

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10
Alaska	GMT-9
Pacific Time(P.T)	GMT-8
American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2

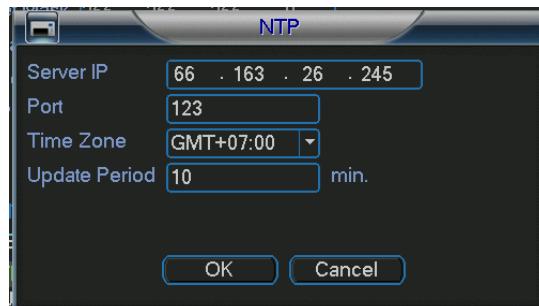


Figure 5-14

5.3.5.6 Email Setup

The Email setup menu is shown as in Figure 5-15. Here you can configure email server information.

Note:

You need to get the email address from your email service provider first.

Please use semicolons to separate multiple servers.

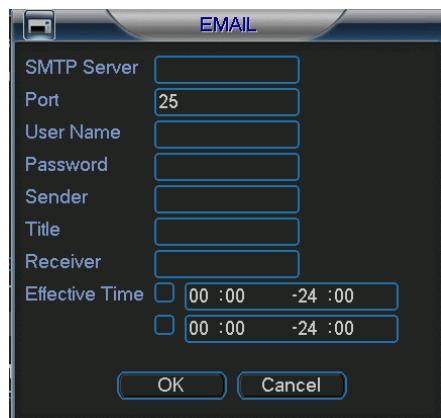


Figure 5-15

5.3.5.7 DDNS Setup

The DDNS setup menu is shown as below. See Figure 5-16.

You need a PC with a static IP address in the network. You will also need the DDNS software running on this PC. In other words, this PC is a DNS (domain name server). In the network DDNS menu, input your PPPoE name you get from your ISP and server IP (PC with DDNS).

Click save button, system prompts for rebooting to get all setups activated.

After rebooting, open IE and input as below:

[http://\(DDNS server IP\)/\(virtual directory name\)/webtest.htm](http://(DDNS server IP)/(virtual directory name)/webtest.htm)

e.g.: http://10.6.2.85/DVR_DDNS/webtest.htm.

Now you can open DDNServer web search page.



Figure 5-16

5.3.5.8 Alarm Server

You can configure the alarm in accordance with different alarm protocols. The system can inform the alarm server when the alarm occurs. See Figure 5-17.

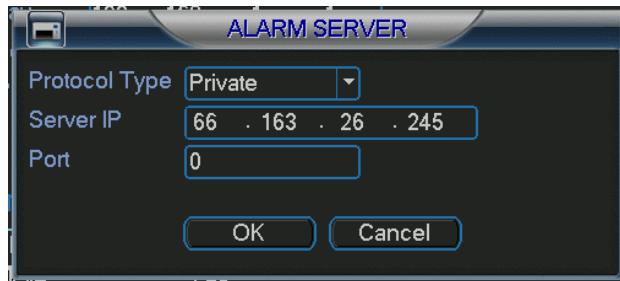


Figure 5-17

5.3.5.9 FTP

You need to download or buy FTP service tool (such as Ser-U FTP SERVER) to establish FTP service.

Please install Ser-U FTP SERVER first. From “start” -> “program” -> Serv-U FTP Server -> Serv-U Administrator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 5-18.

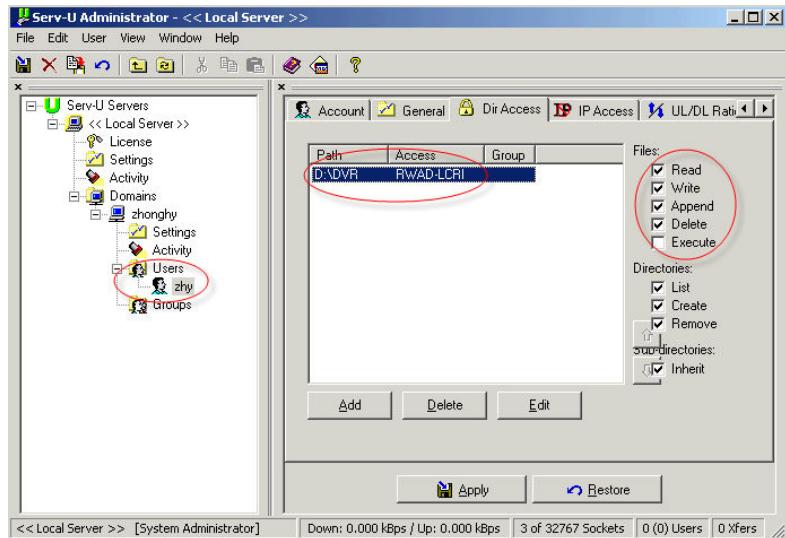


Figure 5-18

You can use a PC or FTP login tool to test if the setup is right or not.

For example, you can login user with ZHY to <FTP://10.10.7.7> and then test if it can modify or delete the folder or not. See Figure 5-19.



Figure 5-19

The system also supports the upload of multiple DVRs to one FTP server. You can create multiple folders under this FTP.

In Figure 5-9, select FTP and then double click mouse. You can see the following interface. See Figure 5-20.

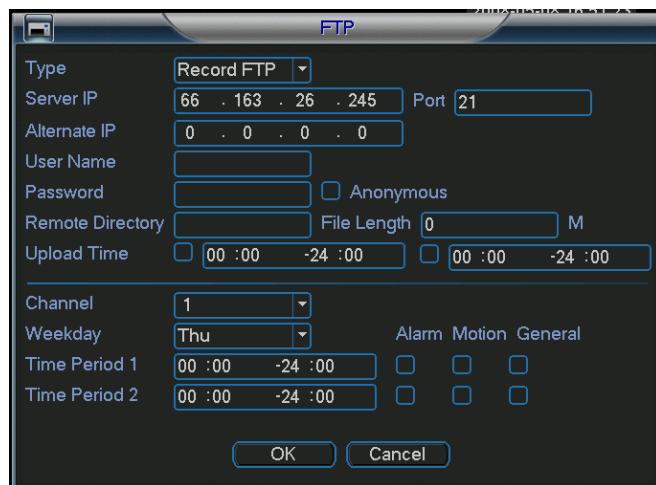


Figure 5-20

Please highlight the icon in front of Enable to activate the FTP function.

Now the FTP feature can upload alarm video and motion detection video. Note, when you are using this function, make sure the current upload channel is in motion detection or alarm record status and there is video available.

Here you can input FTP server address, port and etc.

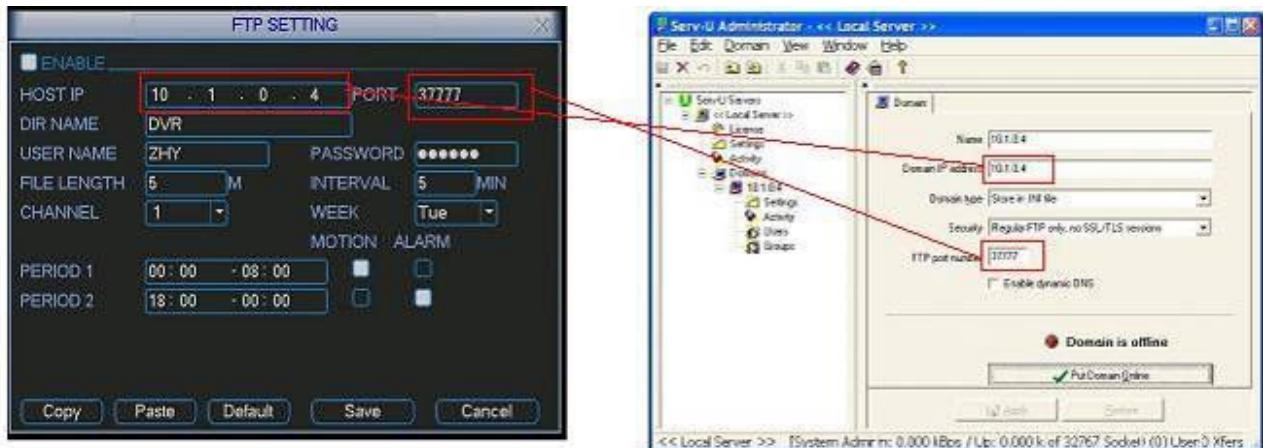


Figure 5-21

- File length: upload file length. When the value is larger than the actual file length, the system will upload the whole file. When this value is smaller than the actual file length, system will upload until the file length is reached and ignore the remaining part.
 - When interval value is 0, the system will upload all corresponding files.
 - Period 1 and period 2: you can set two periods: one for each channel.
- System file name is shown as in Figure 5-22.



Figure 5-22

5.3.6 Alarm

Please refer to Chapter 4.6 Alarm Setup and Activation.

5.3.7 Detect

Please refer to Chapter 4.5 Detect.

5.3.8 Pan/Tilt/Zoom

The pan/tilt/zoom setup includes the following items. Please select channel first.

See Figure 5-23.

- Protocol: select corresponding PTZ protocol such as PELCOD.
- Address: input corresponding PTZ address.
- Baud rate: select baud rate.
- Data bit: select data bit.
- Stop bit: select stop bit.
- Parity: there are three options: none/odd/even.

After completing all the setups please click save button, system goes back to the previous menu.

For a detailed setup, please refer to Chapter 4.9 preset/patrol/pattern/scan.

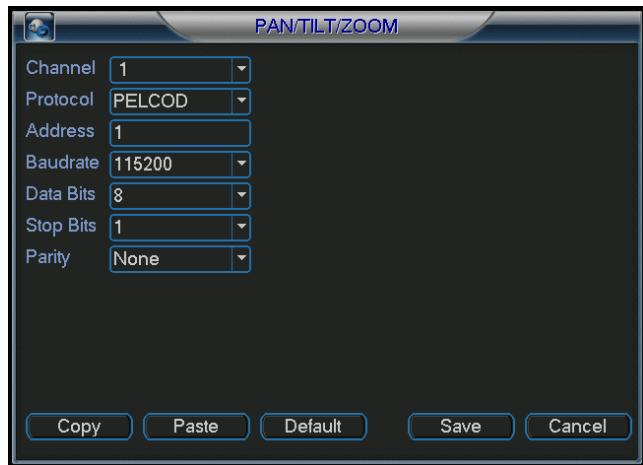


Figure 5-23

5.3.9 Display

The Display setup menu is shown as below. See Figure 5-24.

- Transparency: This is where you can adjust the transparency of the menus. The value ranges from 128 to 255.
- Channel name: This is where you can modify channel names. Please note all of your modifications here only apply to the DVR locally. You will need to open the web or client end to refresh channel name.
- Time display: You can select to display time or not when the system is in playback.
- Channel display: You can select to channel name or not when the system is in playback.
- Overlay information: System displays some indicator icons on screen for reference.
- Display mode: you can select from the dropdown list: self-adaptive/VGA/TV.
- Enable tour: activate tour function.
- Interval: Please input proper interval value here.. The value ranges from 5-200 seconds. During the tour process, you can use the mouse or press F2 or Shift to turn on the tour. Stands for tour enabled, stands for tour disabled.
- Motion tour type: System supports either 1/8 view tour.
- Alarm tour type: System supports either 1/8 view tour.

Please highlight icon to select the corresponding function.

After completing all the setups please click save button, system goes back to the previous menu.

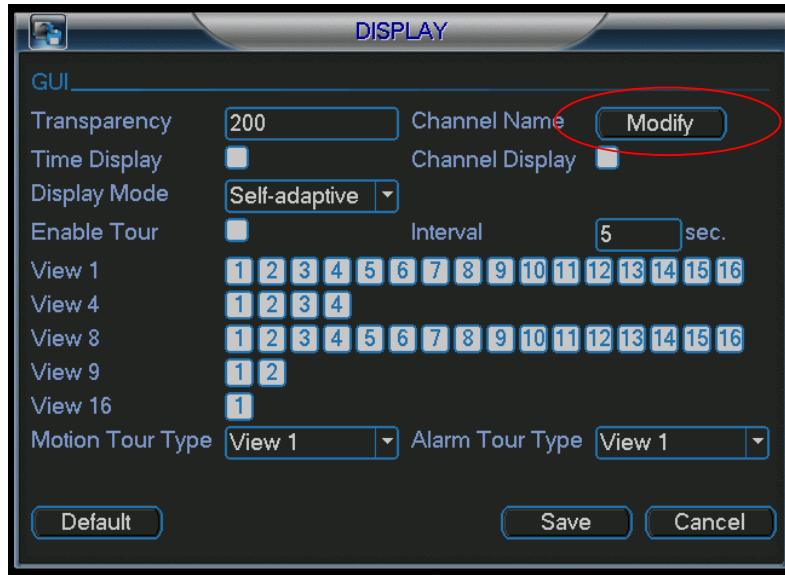


Figure 5-24

In Figure 5-24, click modify button after channel. You can see an interface is shown as in Figure 5-25. Please note all your modification here applies to local end only. You need to refresh web or client-end to get the latest channel name. System max support 25-digital character.



Figure 5-25

In tour mode, you can see the following interface. On the right corner, right click mouse or click shift to control the tour. There are two icons: stands for tour enabled and stands for tour disabled. See Figure 5-26.

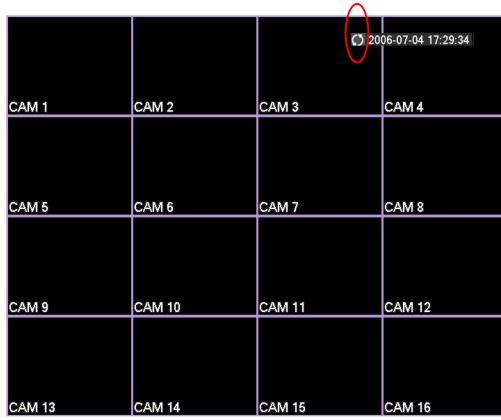


Figure 5-26

5.3.10 Default

Here you can restore your system to factory default settings. See Figure 5-27.

- Select all
- General
- Encode
- Schedule
- RS232
- Network
- Alarm
- Detect
- Pan/tilt/zoom
- Display
- Channel name

Please highlight icon  to select the corresponding function.

After completing all the setups please click save button, system goes back to the previous menu.

Warning!

System menu color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!

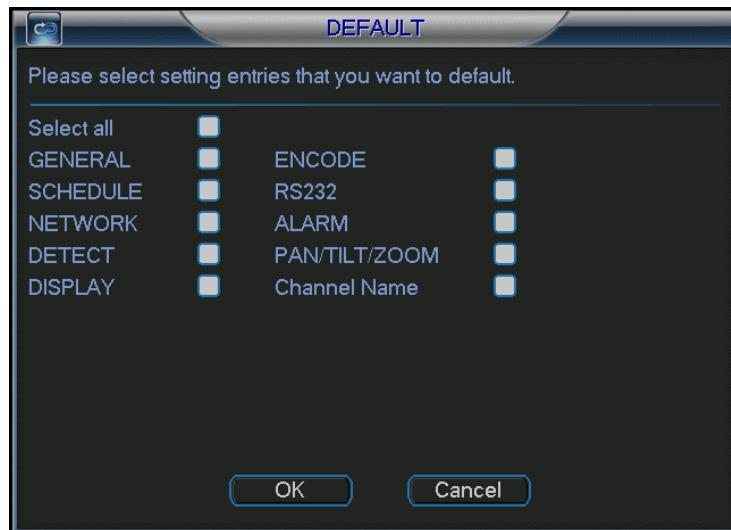


Figure 5-27

5.4 Search

Please refer to chapter 4.3 Search.

5.5 Advanced

Left click advanced icon in the main window, you can see an interface is shown as in Figure 5-28. There are total seven submenus: HDD management, alarm output, abnormality, manual record, account, auto maintain, and TV adjust.

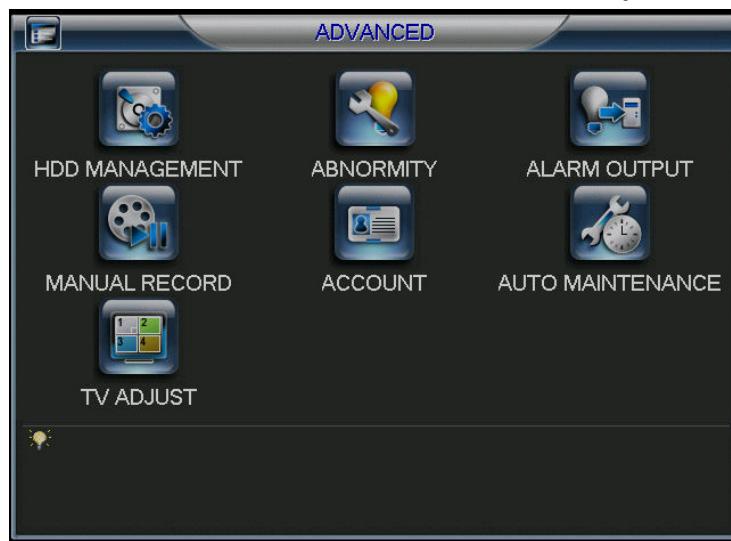


Figure 5-28

5.5.1 HDD Management

Here you can view and manage hard disks. See Figure 5-29.

You can assign functions for each hard disk from the dropdown menu.

When you use the redundant backup function, you can set one or more redundant HDD(s).

Please note, you need to set at least one read-write disk, otherwise the system will not record video.

For detailed information you can refer to chapter 4.4 Schedule.

After completing all the setups please click save button, system needs to reboot to get all the modification activated.



Figure 5-29

Click alarm set button, the interface is shown as below. See Figure 5-30 (This interface is just like the abnormality setup).

Please highlight icon to select the corresponding function.

You can manually enable one or more alarm setups. Alarm channel number ranges from 1 to 6. Delay value is from 0 to 240 seconds.

After completing all the setups please click save button, system needs to reboot to get all the modification activated.



Figure 5-30

5.5.2 Abnormity

The Abnormity interface is shown as in Figure 5-31.

- Event type: There are several options for event triggers such as disk error, no disk and etc.
- Alarm output: alarm activation output port (multiple choices).
- Latch: Here you can set a delay time. The value ranges from 10s-300s. The system automatically delays the specified seconds in turning off alarm and activated output after the external alarm ends.
- Show message: the system can pop up a message in the local screen to alert you when an alarm occurs.
- Send email: the system can send out an email alert when an alarm occurs.



Figure 5-31

5.5.3 Alarm Output

Here you can manually configure alarm outputs.

Please highlight icon to select the corresponding alarm output. See Figure 5-32. After completing all the setups please click save button, system needs to reboot to get all the modification activated.

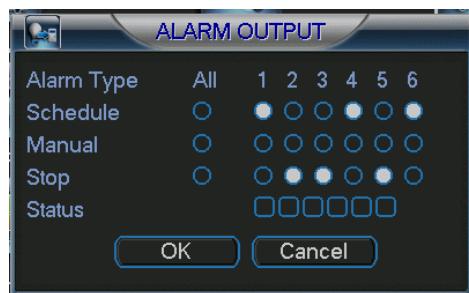


Figure 5-32

5.5.4 Manual Record

Please refer to Chapter 4.2.2 manual record.

5.5.5 Account

Here is for you to implement account management. Here you can:

- Add new users
- Modify users
- Add groups
- Modify groups
- Modify passwords

For account management, please note:

- Accounts are grouped into users and groups. There is no limit to the number of groups or users.
- By default, users are grouped as either admin or user.
- The user name and group name can consist of six characters. Each user name must be unique. There are three default user accounts. Each account's default password matches the user name: The “**Admin**” login has full administrative rights on the DVR. The “**User**” login has viewing and playback rights. Finally, the “**Guest**” login allows only live viewing access.
- One user can belong to only one group. User rights can not exceed group rights.

Please click save button after you completed the setup.

ACCOUNT			
4	User	Group	Status
1	888888	admin	Login Local
2	666666	user	Normal
3	admin	admin	Normal
4	default	user	Default User

Add User **Modify User**
Add Group **Modify Group** **Modify Password**

Figure 5-33

5.5.6 Auto Maintain

Here you can configure auto-reboot time and the auto-delete of old files. See Figure 5-34.

You can select the options from the dropdown list.

Please click O.K button after you completed the setup.

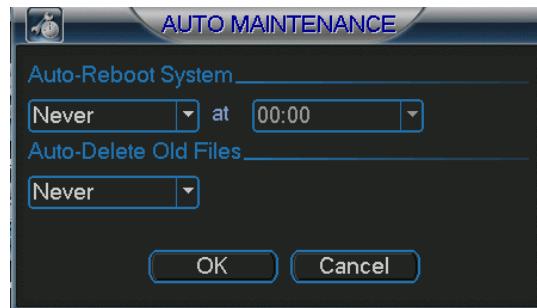


Figure 5-34

5.5.7 TV Adjust

Here you can adjust the TV output. See Figure 5-35.

Please drag the slider bar to adjust each item.

Please click OK button after you completed the setup.



Figure 5-35

5.5.8 Video Matrix (For Special Series only)

Some series DVR have the matrix and loop outputs.

5.5.8.1 Loop outputs

These are just the same as video distributors. There are 4/8/16-ch video loop outputs from our DVR. The DVR video output can connect with other devices such as TV walls, analog matrices and so on.

5.5.8.2 Matrix outputs

They are similar to a small-scale matrix. You can select any camera from our DVR to sequentially tour. The matrix outputs can be used to build TV walls and tour and display the cameras one by one.

5.5.8.3 Rear Panel Connection

The rear panel is shown as below. See Figure 5-36.

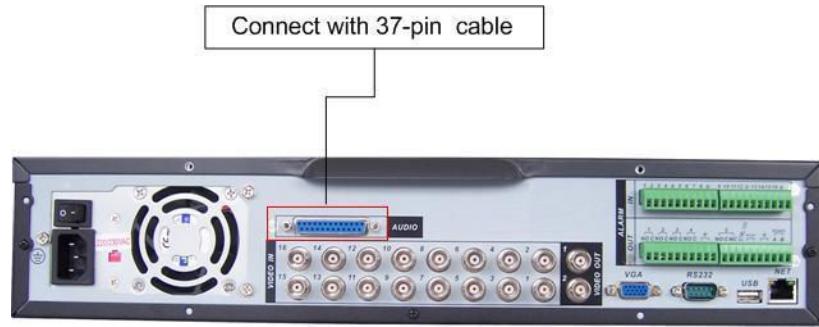


Figure 5-36

5.5.8.4 37-pin cable introduction

There are three colors of connectors on the cable. See Figure 5-37.

- Black: for loop outputs, there are 16-ch loop outputs
- Blue: for matrix outputs, there are 4-ch matrix outputs
- White: for bi-direction talk, one is for audio in and the other is for audio out.



Figure 5-37

5.5.8.5 Matrix setup

5.5.8.5.1 Configuring Video Matrix

From the main menu, go to “Advanced” then to “Video Matrix”.



Figure 5-38

5.5.8.5.2 Right Mouse Menu

Alternatively, in an one-window display mode, right click mouse to select “Video

Matrix". See

Figure 5-39.

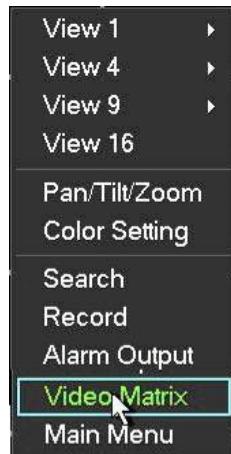


Figure 5-39

5.5.8.6 Video Matrix Interface and Application

The video matrix menu is shown in

Figure 5-40.

The pure video matrix model supports 4 channels of matrix outputs. The hybrid audio/video model supports 1 channel matrix output, as well as 4 audio inputs. All the operations described below are based on a 16-channel audio/video basic model series DVR.

5.5.8.6.1 Scheduled Video Output (Scheduled Tour)

Enable the corresponding video output item, input a tour interval, and then set the tour output channel. The system supports a maximum of 16 channels. Now the system will implement the tour output as you just specified.

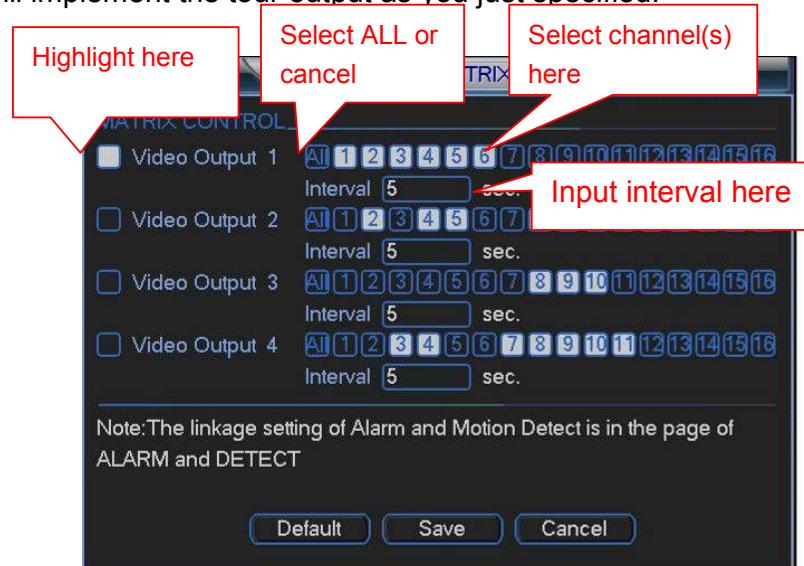


Figure 5-40

5.5.8.6.2 Alarm Activation Matrix

Navigate to the alarm setup menu to trigger the activation of the matrix tour ((Main Menu->Setting->Alarm)).

You can follow the steps listed below to trigger matrix outputs.

- Select local alarm
- Select a channel from the record channel row
- Select a matrix output from the video matrix row.

After selecting the activation channel in the record channel row, you can enable the video matrix function and then select video output channel. Once the alarm occurs, the system continues scheduled matrix tour after alarm tour completes. If there is no scheduled tour available, the matrix will stop at the last activation channel after the alarm ends.

When there are several alarm inputs at the same time, the situation maybe a little bit complex. Here is an example.

The system setup is shown as below:

- Alarm input 1 can activate channel1/2/3/4/5/6
- Alarm input 2 can activate channel 2/3/4/5/6/7/8
- Alarm input 1 and alarm input 2 activate video output 1.

So, when there is alarm from channel 1, video output 1 becomes valid. If there is no alarm from alarm input 2 during the same period, then video output 1 can tour between channel1/2/3/4/5/6.

When video output 1 goes to channel 3 and there is alarm form channel2, then video output 1 tour between 4/5/6/7/8/2.

The general principles are:

- When the alarm activate, each valid channel alarm input can activate a complete tour between activation channels.
- When there are several alarm inputs in the same video matrix output, the system video matrix can activate all the channels in the setup.
- If the system has toured some activation channels, then corresponding alarm activation channels are ignored.

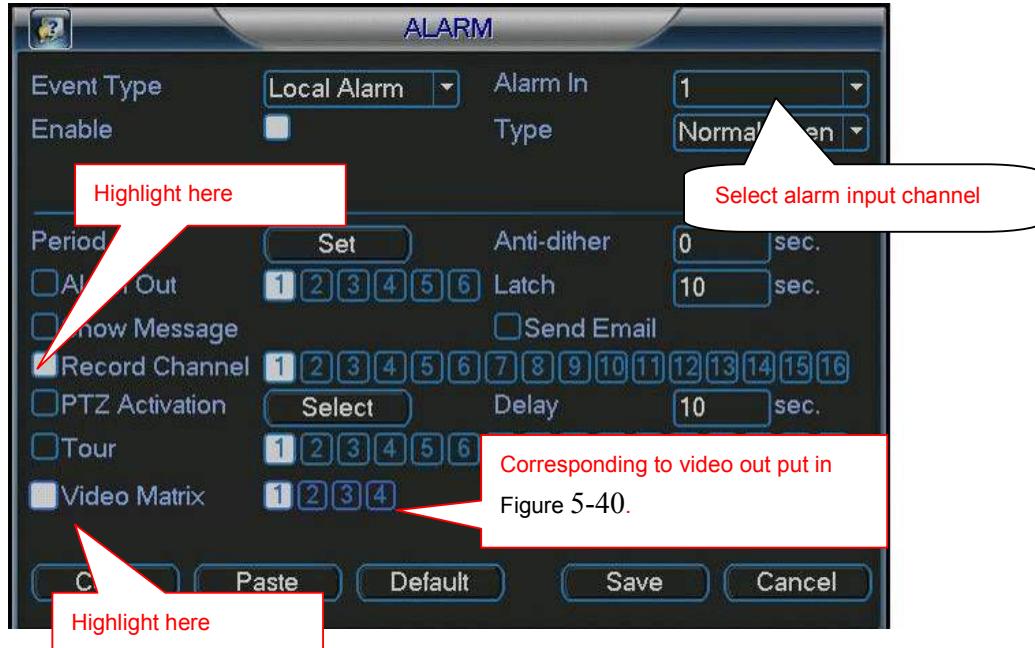


Figure 5-41

5.5.8.6.3 Motion Detection (including video loss and camera masking)

The Motion detection principle is the same as alarm. You can set this from the motion detection menu (Main menu->Setting->Detect). See Figure 5-42.

In the detect menu, you can set the activation channel. You can also enable video matrix function, and then set video matrix output channel as well. Once the activation occurs, the system continues the scheduled matrix tour after the motion detection tour completes. If there is no scheduled tour available, the matrix will stop at the last activation channel after the alarm ends.

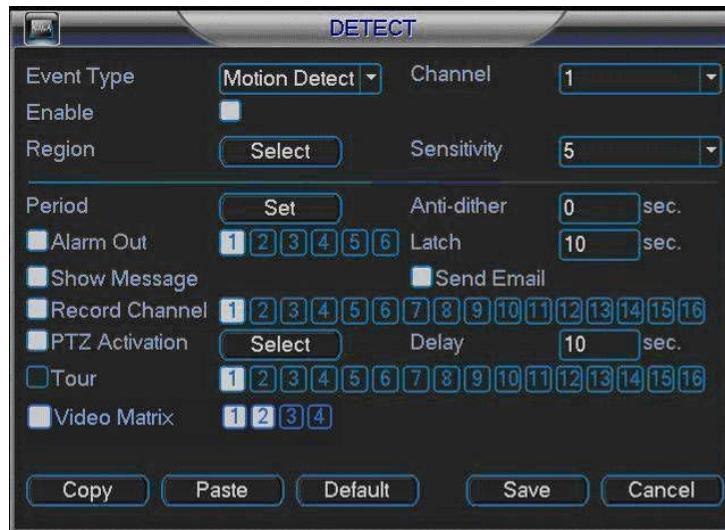


Figure 5-42

5.5.8.6.4 Touring Order of Operations

When the system is in a scheduled tour status and an alarm triggers, the system will first check if the video matrix function has been enabled or not, and also if there is an

effective matrix or not. The system will continue executing the scheduled tour assuming the following two conditions:

- The video output function has not been enabled.
- There is no video matrix setup available.

If there is valid video matrix setup, the system can activate the corresponding tour amongst the alarm channels, and then also begin the scheduled tour after the alarm tour completes.

If there is no schedule tour available, the matrix will stop at the last activation channel after the alarm ends.

Motion detection activation is almost the same as the alarm, but it has different priorities. The system will continue executing the scheduled tour assuming the following two conditions:

- Video output function has not been enabled.
- There is no video matrix setup available.

If there is a valid video matrix setup, the system will check whether there is a tour of higher priority and then execute the corresponding process. During the motion detection tour, the system will process alarm triggers first if an alarm occurs. It is the same as if an alarm occurs in a scheduled tour period.

5.6 Information

Here is for you to view system information. There are total five icons: HDD (hard disk information), BPS (data stream statistics), Log and version, and online user. See Figure 5-43.

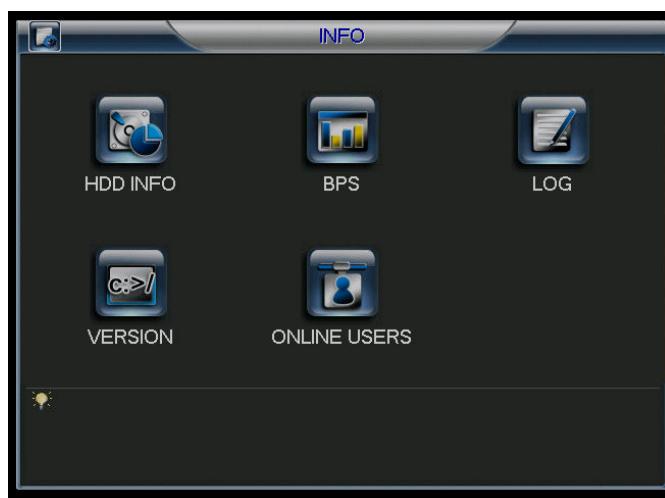


Figure 5-43

5.6.1 HDD Information

This interface lists the installed HDD's as well as the total space, free space, video start time and status. See Figure 5-44.

Note:

Please remove a damaged hard disk before you add a new one.

If there is a hard disk conflict, check the hard disk time and system time are the same. If not, go to “Setting”, and then “General” to modify the system time. At last, reboot the system to solve this problem.

If a disk is damaged, the system shows as “?”

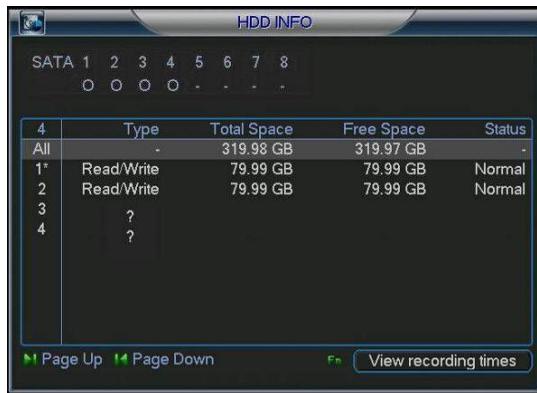


Figure 5-44

5.6.2 BPS

Here is for you to view current video data stream (KB/s) and occupied hard disk storage (MB/h). See Figure 5-45.

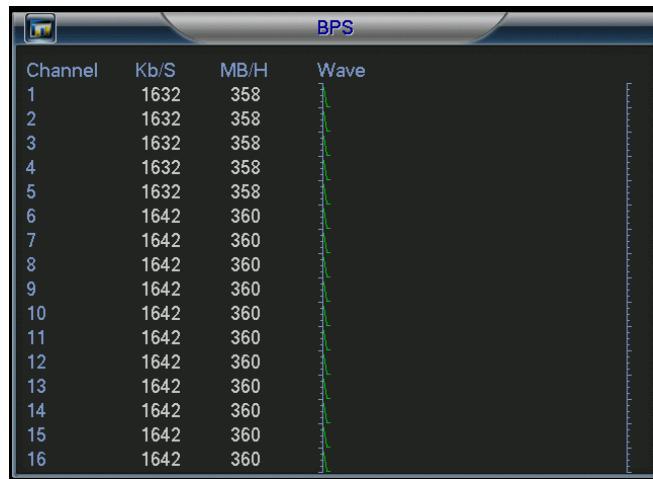


Figure 5-45

5.6.3 Log

Here is for you to view the system log file. See Figure 5-46.

Log types include system operation, configuration changes, data management, alarm event, record operation, and log clear.

Select start time and end time, and then click search to view the log files. You can use page up/down to view the additional files.

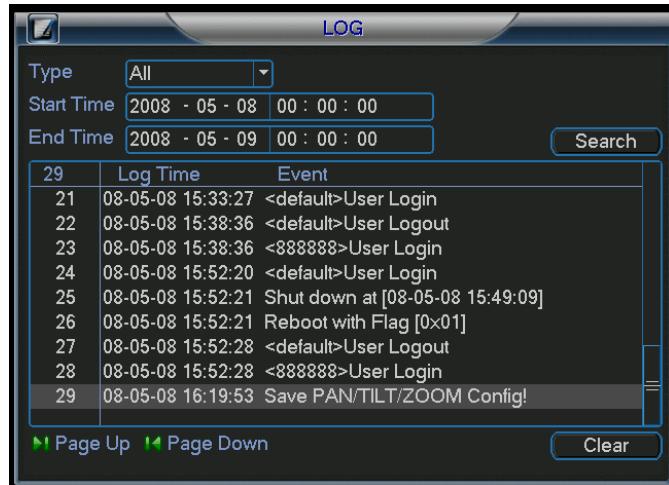


Figure 5-46

5.6.4 Version

Here you can view some version information. See Figure 5-47.

- Channel
- Alarm in
- Alarm out
- System version:
- Build Date

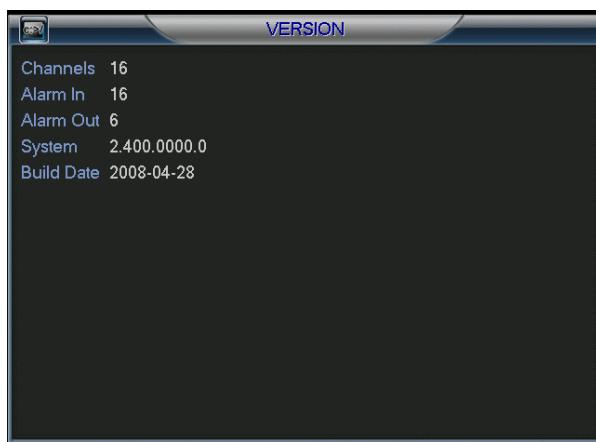


Figure 5-47

5.6.5 Online Users

Here is for you to manage online users. See Figure 5-48.

You can disconnect one user or block one user if you have the appropriate system rights.



Figure 5-48

5.7 Exit

Left click exit, and you will be prompted with a dropdown menu. See Figure 5-49.

- Logout menu user: log out menu. You need to input password when you login the next time.
- Restart application: reboot DVR.
- Shutdown: system shuts down and turns off power.
- Restart system: system begins rebooting.
- Switch user: you can use another account to log in.



Figure 5-49

6 Controlling Pan/Tilt/Zoom Cameras

6.1 Go to Pan/Tilt/Zoom Menu

In the one-window surveillance mode, right click the mouse (press “fn” in the front panel or press AUX key in the remote control). The interface is shown as below: See Figure 6-1.



Figure 6-1

Click Pan/Tilt/Zoom, the interface is shown in Figure 6-2.

Here you can set the following items:

- Zoom
- Focus
- Iris

Click icon and to adjust zoom, focus and Iris.



Figure 6-2

In Figure 6-2, click the directional arrows (See Figure 6-3) to adjust the PTZ's position. There are total eight directional arrows. (Note: there are only four directional arrows in DVR front panel.)



Figure 6-3

6.1.1 3D Intelligent Positioning Key

In the middle of the eight directional arrows, there is a 3D intelligent positioning key. See Figure 6-4 . Click the center to activate this option. The system should now go

back to the single screen mode without the graphical directional pad. Drag the mouse in the screen to adjust section size.



Figure 6-4

Here is a sheet for you reference.

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near	>		Far	>>
Focus		Near	<		Far	>
Iris		Close	<		Open	>

6.2 Preset /Patrol / Pattern /Border Function

In Figure 6-2 click the set button. The interface is shown as below:

Here you can set the following items:

- Preset
- Tour (patrol)
- Pattern
- Border



Figure 6-5

In Figure 6-2, click the page switch button you can see an interface is shown as in Figure 6-6.

Here you can activate the following functions:

- Preset
- Tour(Patrol)
- Pattern
- Auto scan
- Auto pan
- Flip
- Page Switch



Figure 6-6

6.2.1 Preset Setup

Note: The following setups are usually operated in the Figure 6-2, Figure 6-5 and Figure 6-6.

In Figure 6-2, use the eight directional arrows to adjust the camera to the proper position you desire.

In Figure 6-5, click preset and input preset number. The interface is shown as in Figure 6-7.

Add this preset to one patrol number



Figure 6-7

6.2.2 Activate Preset

In Figure 6-6 input your desired preset number in the No. _____, and click preset to activate it.

6.2.3 Tour Setup

In Figure 6-5, click patrol button. The interface is shown as in Figure 6-8.
Input preset number and then add this preset to one patrol (tour).



Figure 6-8

6.2.4 Activate Tour

In Figure 6-6, input tour number in the No. _____ and click patrol(tour) button.

6.2.5 Pattern Setup

In Figure 6-5, click pattern and then click begin to start the pattern recording. The interface is shown as in Figure 6-9.

Please go to Figure 6-2 to modify zoom, focus, and iris. Go back to Figure 6-9 and click end button.

You can memorize all these setups as pattern 1.

System supports max 255 different patterns.



Figure 6-9

6.2.6 Activate Pattern Function

In Figure 6-6 input the desired pattern preset mode value in the No. _____, and then click pattern to activate it.

6.2.7 Border Setup

In Figure 6-5, click border you can see an interface is shown as in Figure 6-10. Go to Figure 6-2 and use the directional arrows to select the camera's left limit.

Now go back to Figure 6-10 and click left limit button.

Repeat the above procedures to set the right limit.



Figure 6-10

6.2.8 Activate Border Function

In Figure 6-6, click auto scan button, the system begins auto scan. Correspondingly, the auto scan button changes to stop button.

Click stop button to terminate scan operation.

6.2.9 Flip

In Figure 6-6, click page switch button, you can see an interface is shown as below.

See

Figure 6-11. Here you can set auxiliary function.

Click page switch button again, system goes back to Figure 6-2.

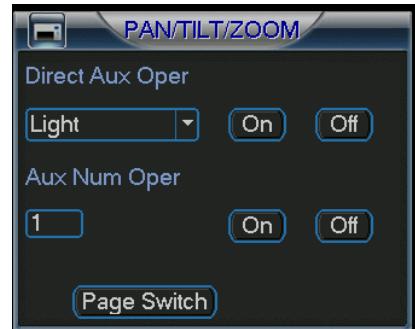


Figure 6-11

7 WEB CLIENT OPERATION

All the operations listed below are based on a 16-ch DVR. There might be slightly difference in the interface due to different series.

7.1 Network Connection

Before web client operation, please check the following:

- Physical network connection
- TCP/IP settings on PC and DVR side. Refer to the network setup (main menu→setting→network)
- Use the windows command ‘ping ***.***.***.***’(* DVR IP address) to check the connection. Usually the return TTL value should be less than 255.
- The system is compatible with WIN VISTA web control right now, however you will need to disable user account control. Navigate to Start→Control Panel→User Accounts. Double click user accounts and then disable user account control. You will need to restart after this.
- The system can automatically download the latest web control and the new version can overwrite the previous one.
- If you want to un-install the web control, run uninstall web.bat. Note: before you un-install, close all web pages; otherwise the un-installation might result in error.

7.2 Login

Begin by launching IE, and input the DVR IP address in the address bar. For example: if your DVR IP has an IP of 10.10.3.16, then input [http:// 10.10.3.16](http://10.10.3.16) in IE address bar. See Figure 7-1

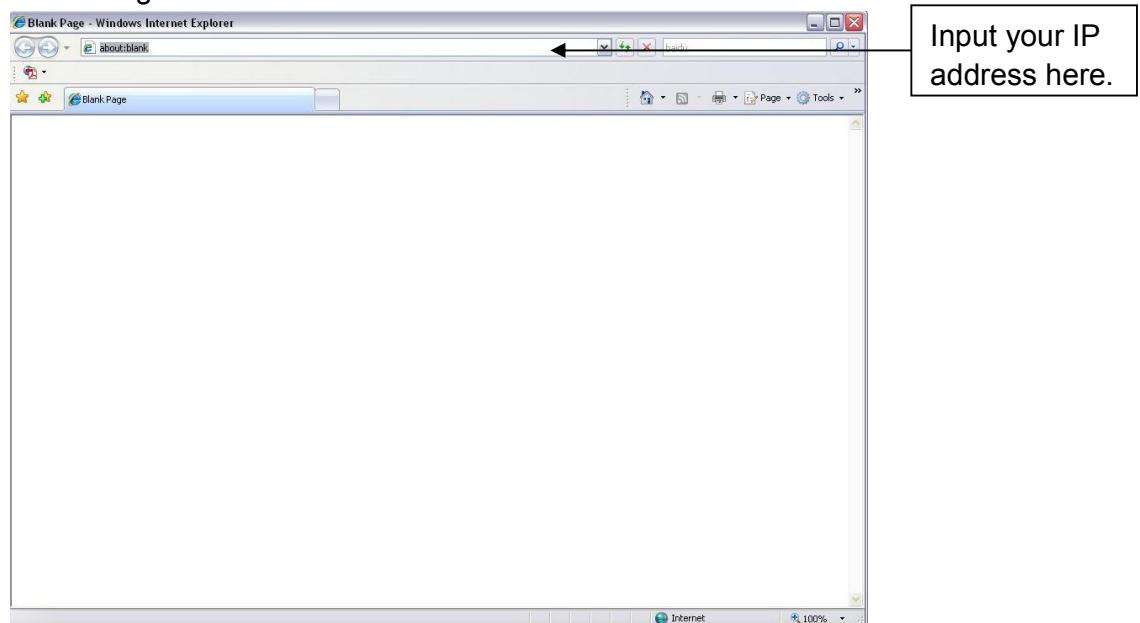


Figure 7-1

Your browser will prompt you to install “webrec.cab”. Click on the information bar, and choose install. If you can't download the ActiveX file, modify your security settings as follows. See Figure 7-2.

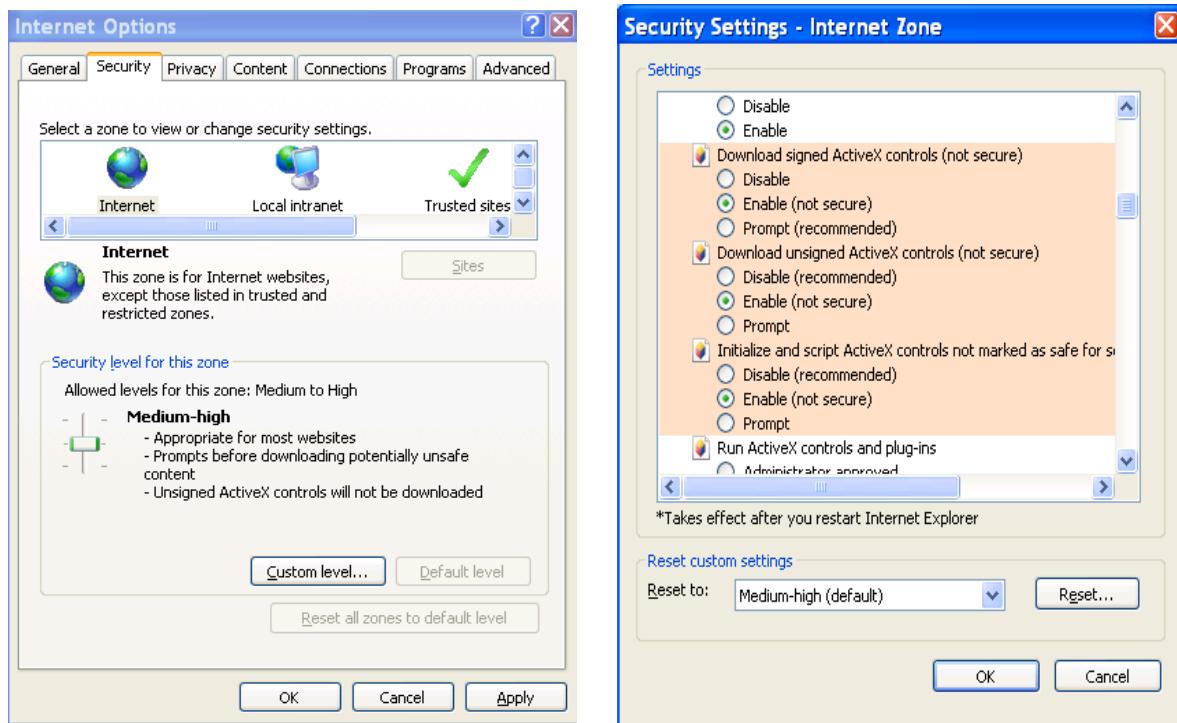


Figure 7-2

After installation, you will have the interface shown below. See Figure 7-3.
Input your user name and password. Default factory name is admin and password is admin. Note: For security reasons, you should modify your password after your first login.

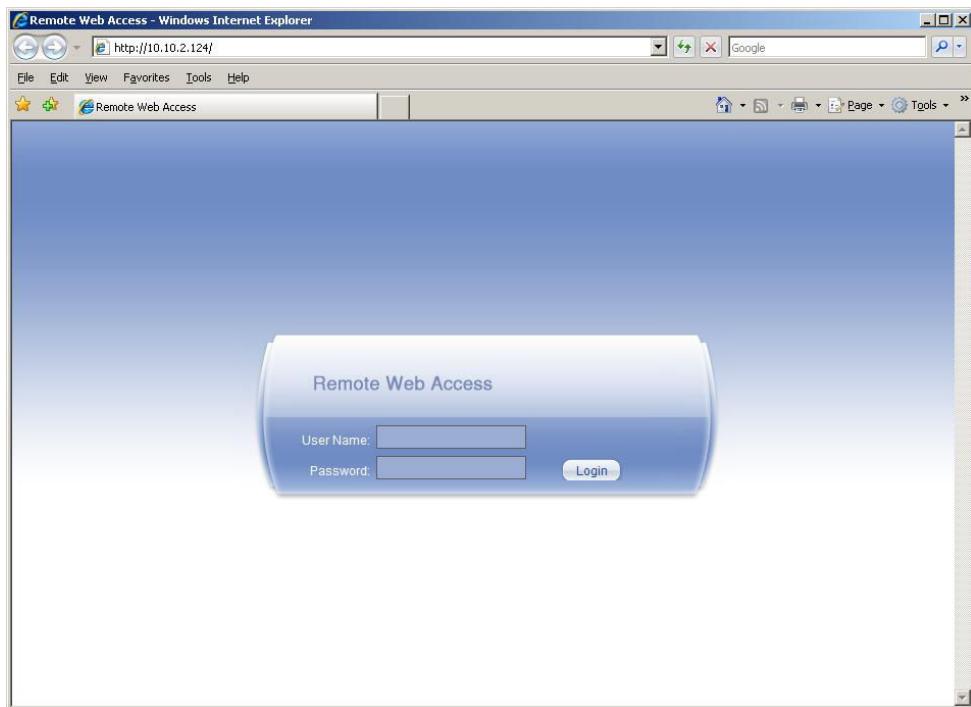


Figure 7-3

After you logging in, you will see the main window. See Figure 7-6.

This main window can be divided into the following sections.

- Section 1: there are five function buttons: setup (chapter 7.3), playback (chapter 7.4), event (chapter 7.5), info (chapter 7.6), log out (chapter 7.7).
- Section 2: there are channel number and three function buttons: start dialog, local play, and refresh.
- Section 3: real-time controls for PTZ (chapter 7.2.2), color (chapter 7.2.3) , and you can also select picture path and record path.
- Section 4: real-time monitor window. Note: current preview window is outlined by a green rectangle.
- Section 5: Here you can control the window layout. You can also select video priority between fluency or real-time.
 - ❖ Supported window layouts include: full screen/1-window/4-window/6-window/8-window/9-window/13-window/16-window/20-window/25-window/36-window. See Figure 7-4.



Figure 7-4

- ❖ Preview window switch. The system supports 1/4/8/9/16-window real-time preview. You will need proper rights to view preview modes.. See Figure 7-5.



Figure 7-5

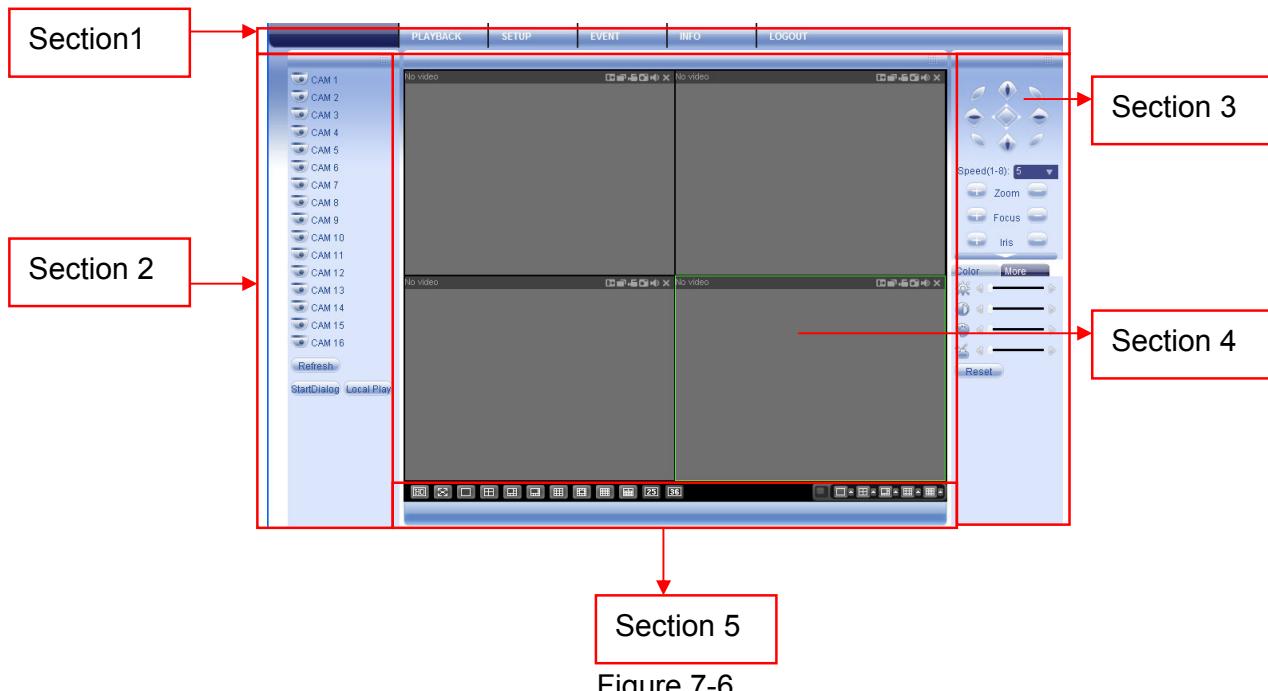


Figure 7-6

7.2.1 Real-time Monitor

In section 2, select the channel name you want to view. The video will play in the selected window. For detailed function key information see Figure 7-7.

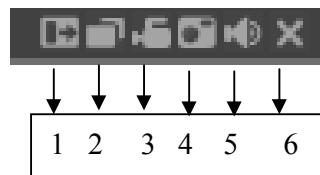


Figure 7-7

- 1: Digital zoom: Click this button to enable digital zoom. Now, you can left click and drag the mouse to select a target. Right click to return.
- 2: Change show mode: resize or switch to full screen mode.
- 3: Local record: When you click local record, the system will begin recording to your PC, and this button will become highlighted. You can go to system → local record to set video file path.
- 4: Capture picture: You can take a snapshot of important video. All images are stored in the system client folder \download\picture (default).
- 5: Audio: Turn on or off audio. (It has no relationship with recording the audio)
- 6: Close video.

Refer to Figure 7-8 for main stream information.



Figure 7-8

Refresh

You can use this button to refresh camera list.

Start Dialogue

You can click this button to enable two way talking.

Local Play

Click local play, and you will be prompted to open a saved video file. See Figure 7-9.



Figure 7-9

7.2.2 PTZ

Before operating a PTZ, make sure you have configured the PTZ protocol, address, and Baud Rate. (Refer to chapter 7.3.2 Setting → Pan/Tilt/Zoom).

Click the PTZ button, you will see the interface shown in Figure 7-10 .

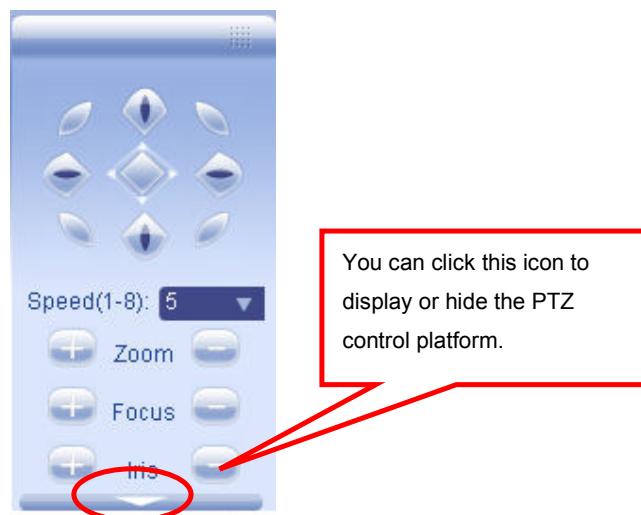


Figure 7-10

7.2.2.1 Direction Key

In Figure 7-10, there are eight direction keys.

7.2.2.2 Speed

System supports eight-level speed. You can select from the dropdown list. Speed 2 is faster than speed 1.

7.2.2.3 Zoom/Focus/Iris

Here is a sheet for reference.

Name	Function key	Function	Function key	Function
Zoom		Near		Far
Focus		Near		Far
Iris		close		Open

Click the triangle icon in Figure 7-10, you will see the following interface. See Figure 7-11.

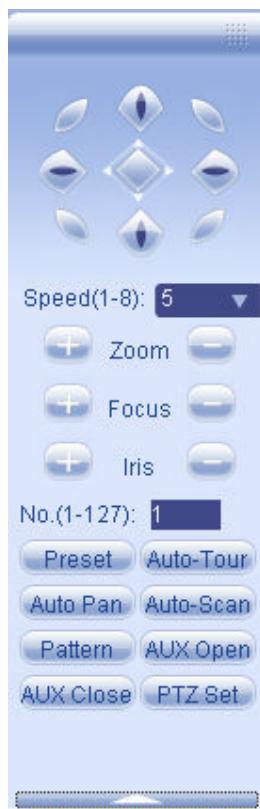


Figure 7-11

In Figure 7-11, click PTZ set, you will see the following interface. See Figure 7-12.

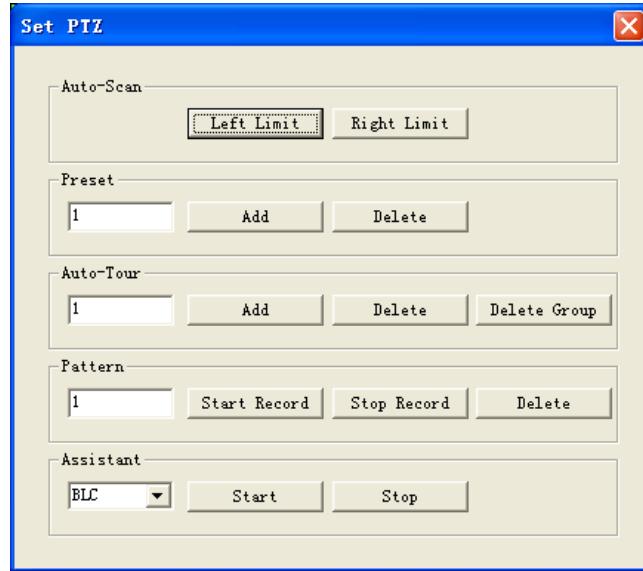


Figure 7-12

7.2.2.4 Auto Scan

In Figure 7-12, move the camera to your desired location and then click left limit. Next, move the camera again and then click right limit, to set a right limit.

7.2.2.5 Pattern

In Figure 7-12, you can input pattern value and then click start record, to trace PTZ movement. Go back to Figure 7-11 to begin camera operation. Once finished, you can click stop record. Now you have set one pattern.

7.2.2.6 Preset

In Figure 7-12, move the camera to your desired location and then input a preset value. Click add to set this as a preset location.

7.2.2.7 Auto tour

In Figure 7-12, input an auto tour value and a preset value. Click add to set the preset in the tour.

By repeating the above procedures you can add more presets in one tour.

7.2.2.8 Assistant

You can select the assistant item from the dropdown list. See Figure 7-13.

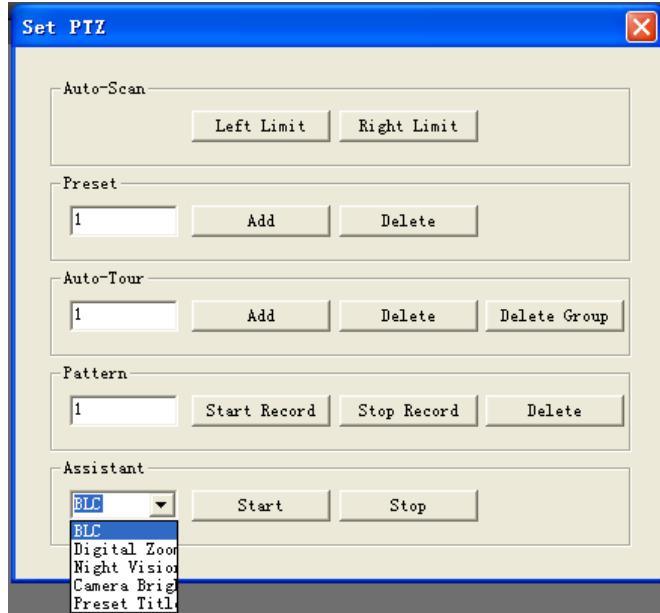


Figure 7-13

7.2.3 Color

Click color, in section 3, the interface is shown in Figure 7-14.

Here you can select one channel and then adjust its brightness, contrast, hue and saturation. (The selected channel has a green border).

Alternatively, you can click default, to use the default color setup.



Figure 7-14

7.2.4 Picture Path and Record Path

Click more, in Figure 7-14, and you will see the interface shown in Figure 7-15.



Figure 7-15

Click picture path to choose a directory for snapshots, as in Figure 7-16.

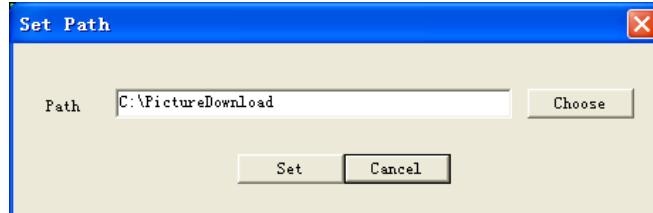


Figure 7-16

Click record path to choose a directory for locally recorded video, as in Figure 7-17.

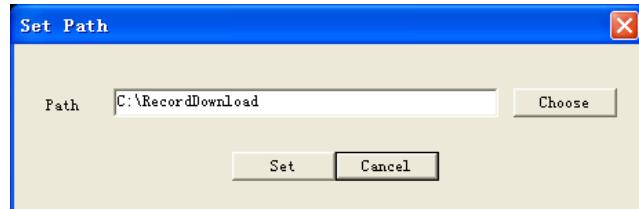


Figure 7-17

Clicking reboot will prompt you to reboot the system. Click OK to continue.

7.2.5 Menu Interface Switch

Put your mouse on the PTZ control bar until you see the following icon. See Figure 7-18.



Figure 7-18

Left click your mouse and then drag it to the channel control status bar. You will notice the two menus interface switched positions. See Figure 7-19. You can compare the following interface with Figure 7-6.

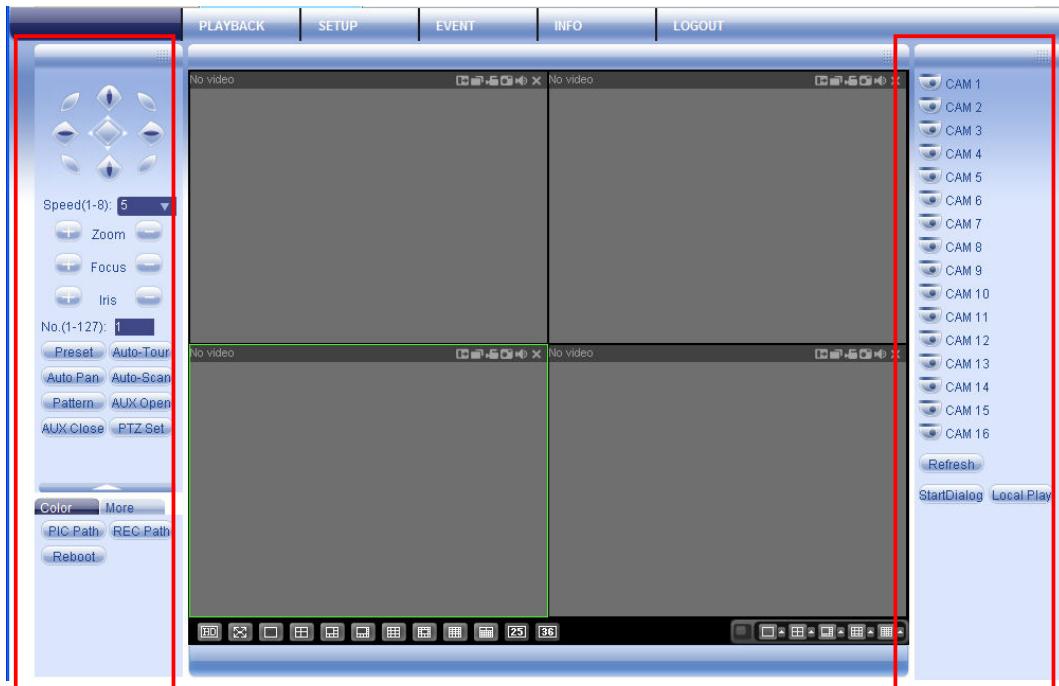


Figure 7-19

7.3 Setup

In the main window, click Setup; you will see an interface as shown in Figure 7-20.

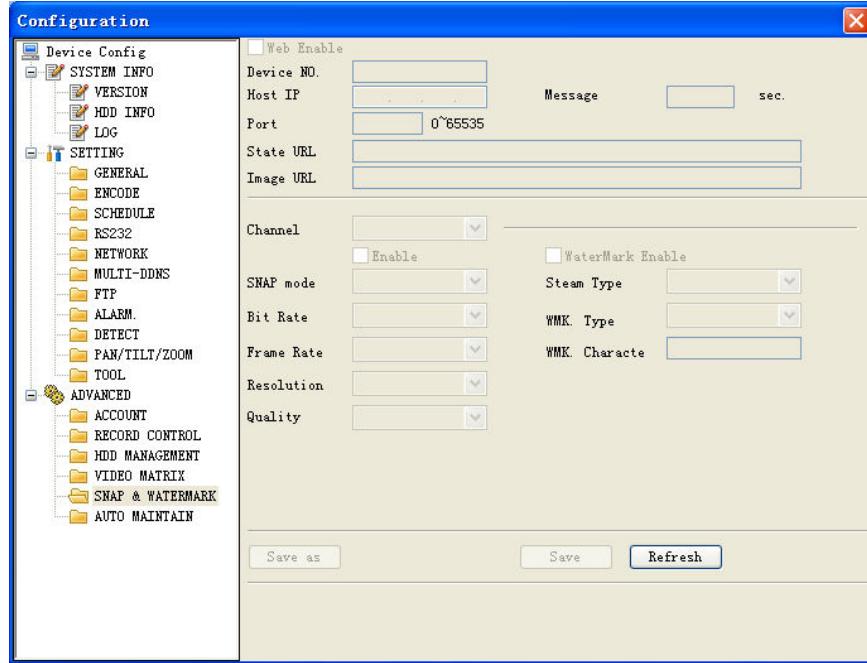


Figure 7-20

7.3.1 System Information

Click device configuration, and you will see the following interface. See Figure 7-21.

Item	Status
S/N	YA102320801A360041
Video In/Out	16/1
Audio In/Out	16/1
Alarm In/Out	16/6
Ethernet Port	1
RS232	1
IDE/SATA Port	0
Bios Version	2.601.KL00.1, Build:2008-5-28

Figure 7-21

● Version

Click version, and you will see corresponding HDD information for reference. See Figure 7-22.

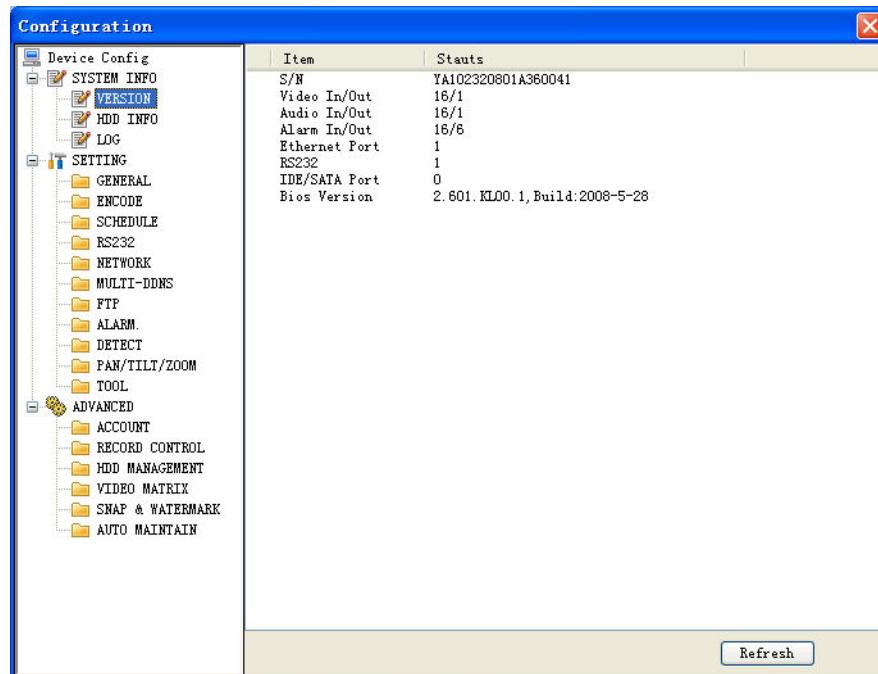


Figure 7-22

● HDD Information

Here you can view the number of HDD's, HDD status, total volume and free space. See Figure 7-23.

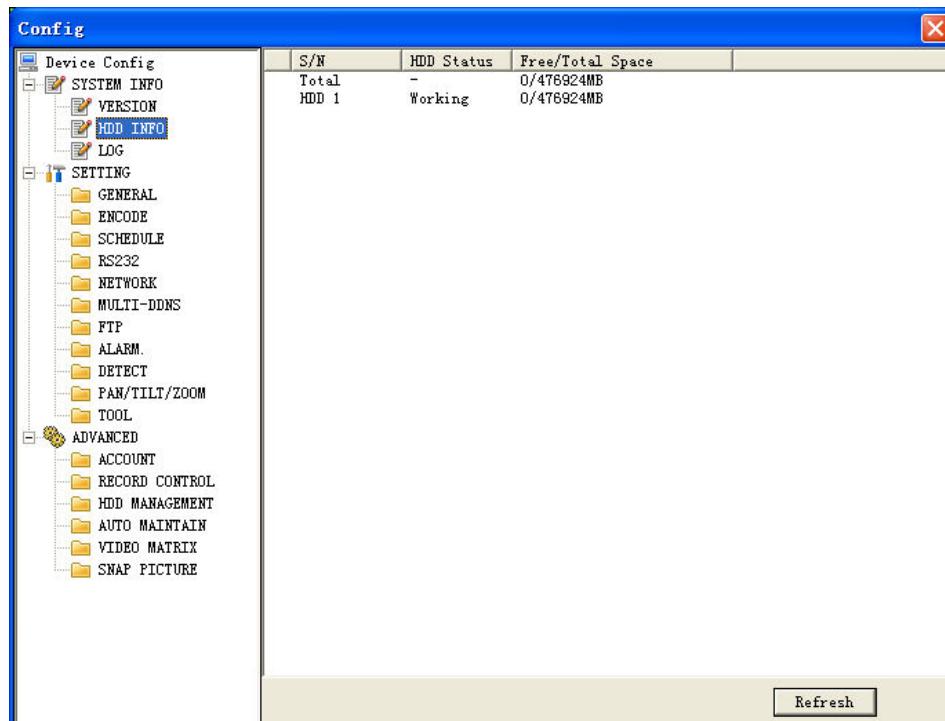


Figure 7-23

- **Log**

Click log, you will see an interface as shown in Figure 7-24. Here you can view current device log information, and filter these results using the ‘Type’ drop-down.

Figure 7-24

7.3.2 Setting

Setting includes the following items:

- ✧ General
- ✧ Encode setup
- ✧ Schedule
- ✧ RS232
- ✧ Network
- ✧ MUL-DDNS
- ✧ FTP
- ✧ Alarm setup
- ✧ Detect
- ✧ Pan/Tilt/Zoom
- ✧ Tool

Note: setups for different device series may vary. Refer to the corresponding user's manual.

- **General**

General interface is shown as in Figure 7-25.

- ✧ System time: This is where you can modify the system time. click ‘Save’ after your changes
- ✧ Date format: Here you can select the date format from the dropdown list.
- ✧ Data separator: select separator such as – or /.

- ✧ Time format: there are two options: 24-H and 12-H.
- ✧ HDD full: there are two options: stop recording or overwrite the previous files when HDD is full.
- ✧ Pack duration: Here you can select file intervals. Default setup is 60 minutes.
- ✧ Device No.: when you are using one remote control to manage multiple DVRs, you can give these DVRs unique addresses. Press RC, on your remote control and then input the correct device number, now you can control that respective DVR now.
- ✧ Video standard: NTSC. (for your reference only)

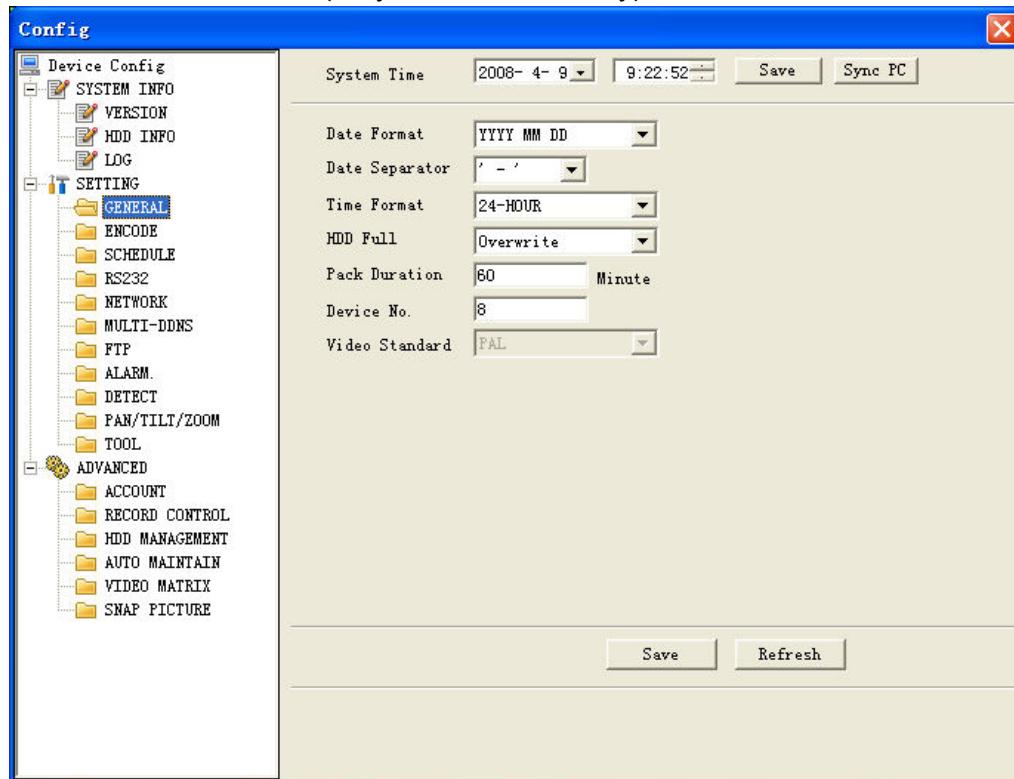


Figure 7-25

● Encode

Encode setup includes the following items. See Figure 7-26.

Here you can select

- ✧ Channel: This is where you can select a channel.
- ✧ Channel name: Modify channel name.
- ✧ Data stream: Regular and extra data stream.
- ✧ AV enable: Video/Audio. System only displays video by default. You need to manually enable audio function.
- ✧ Bit rate: There are two options: CBR and VBR. You can only set video quality in VBR mode.
- ✧ Frame rate: The value ranges from 1f/s to 25f/s (PAL) and 1f/s to 30f/s (NTSC).
- ✧ Compression: There is one option: H.264
- ✧ Resolution: D1/HD1/DCIF/CIF
- ✧ Quality: The value ranges from 1 to 6. The level 6 is the best video quality.

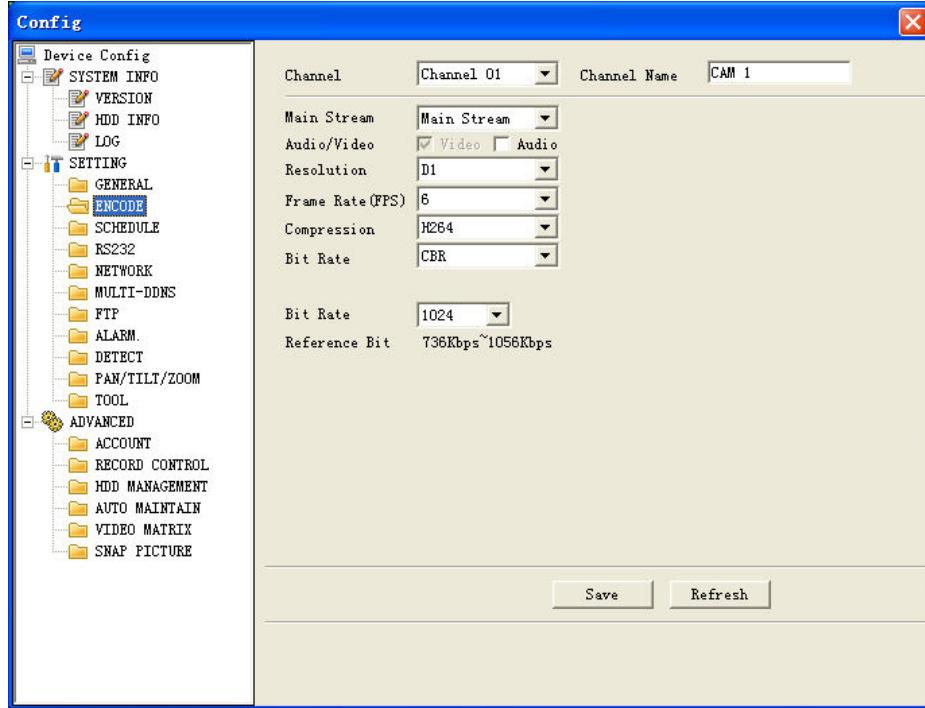


Figure 7-26

● Schedule

Schedule includes the following interface. See Figure 7-27.

When the DVR boots for the first time, it is already set for 24 hour, continuous recording. In this interface you can set a recording type, recording time and periods.

Record types includes regular record(R), motion detection (MD) and alarm(A).

- ◊ Channel: select the channel number you desire.
- ◊ Week: you can select from the dropdown list.
- ◊ Prerecord: system can record the three to five seconds video before activating the record operation into the file.(Depends on data size)
- ◊ Period: There are six periods for you to define. Click set, next to the corresponding period. See Figure 7-28. note The setup here is based on a 24 hour cycle. E.g. 00.00 to 24.00.

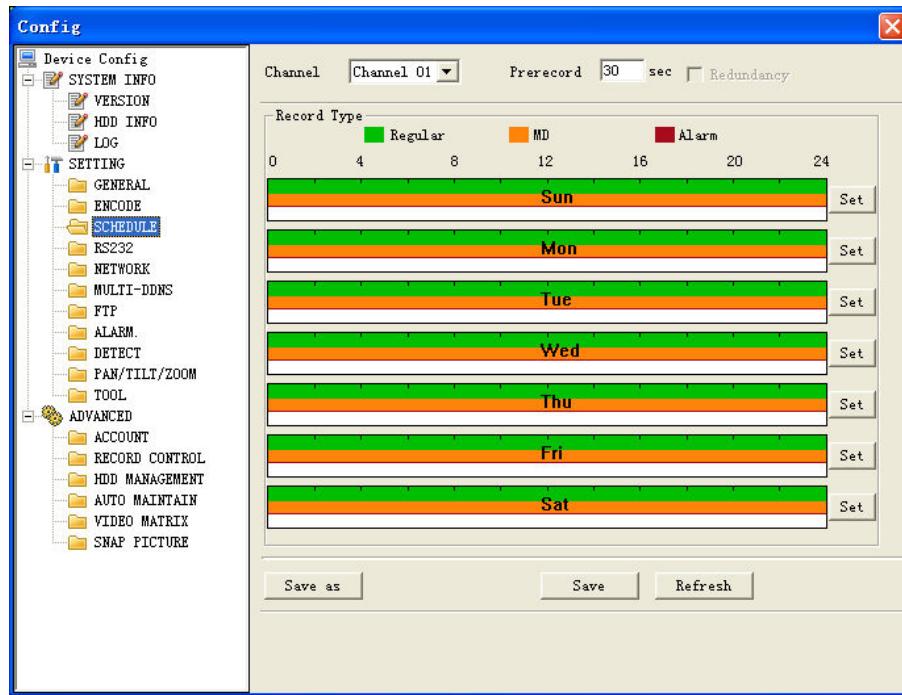


Figure 7-27

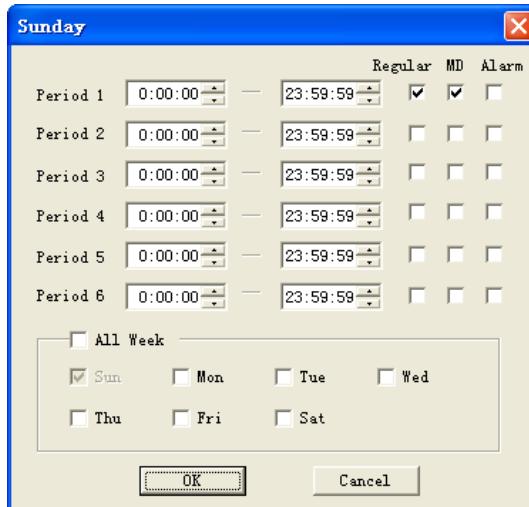


Figure 7-28

Tip:

After you finished setup for one channel, you can click “save as”, which will pop up the following interface. See Figure 7-29. Now you can copy one channels setup to additional channels.



Figure 7-29

● Network

Network interface is shown as in Figure 7-30.

This interface includes the following items:

Max: Here you can set the max number of connections. The value ranges from 0 to 10. 0 means no network connections will be allowed.

TCP port: default setup is 37777. Note port 37778 is for UDP traffic use only.

HTTP port: default setup is 80.

Transfer: Here you can select the priority between fluency/latency qualities.

◆ Enable PPPoE

Select 'PPPoE' under the service type to enable PPPoE function, and then input "PPPoE name" and "PPPoE password" you get from your ISP (Internet service provider). See Figure 7-30.

Once finished, click save. You will need to restart to activate your configuration.

After rebooting, the DVR will connect to the internet automatically. The IP displayed in the IP address item is the public IP address. You can use client-end software to visit current IP now.

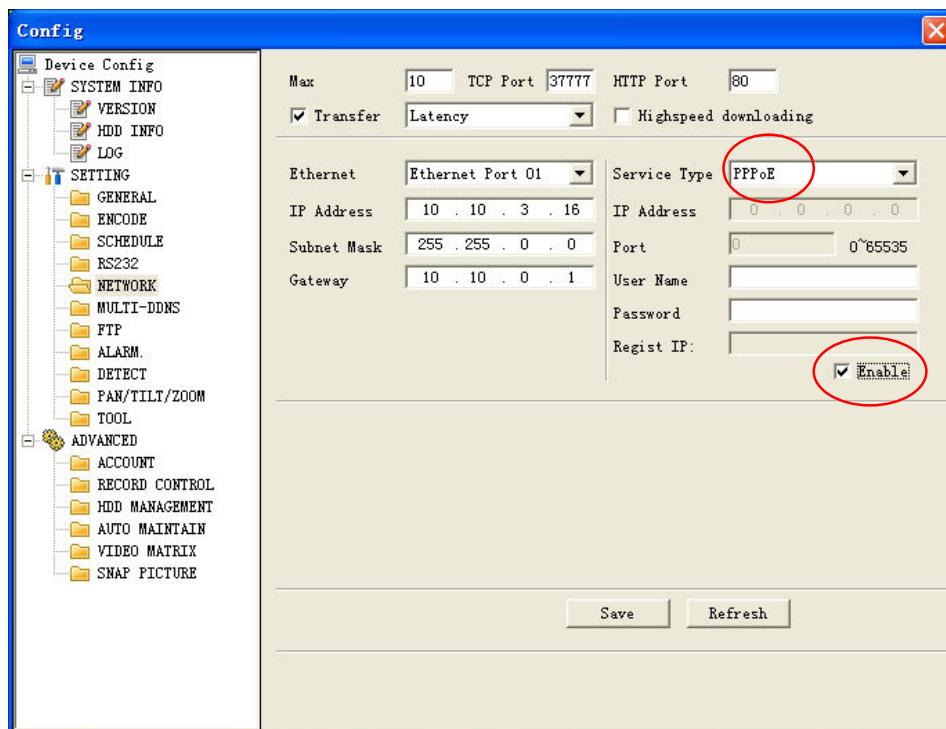


Figure 7-30

✧ Enable DDNS

The DDNS setup menu is pictured below. See Figure 5-16.

You will need a PC with a static IP address on the network. You also need the DDNS software running on this PC. In other words, this PC is a DNS (domain name server). In the network DDNS menu, input your PPPoE name you get from your ISP and server IP (PC with DDNS).

Click the save button, the system will prompt you to reboot.

After rebooting, open IE and input the following:

[http://\(DDNS server IP\)/\(virtual directory name\)/webtest.htm](http://(DDNS server IP)/(virtual directory name)/webtest.htm)

e.g.: http://10.6.2.85/DVR_DDNS/webtest.htm)

Now you can open the DDNSServer web search page.

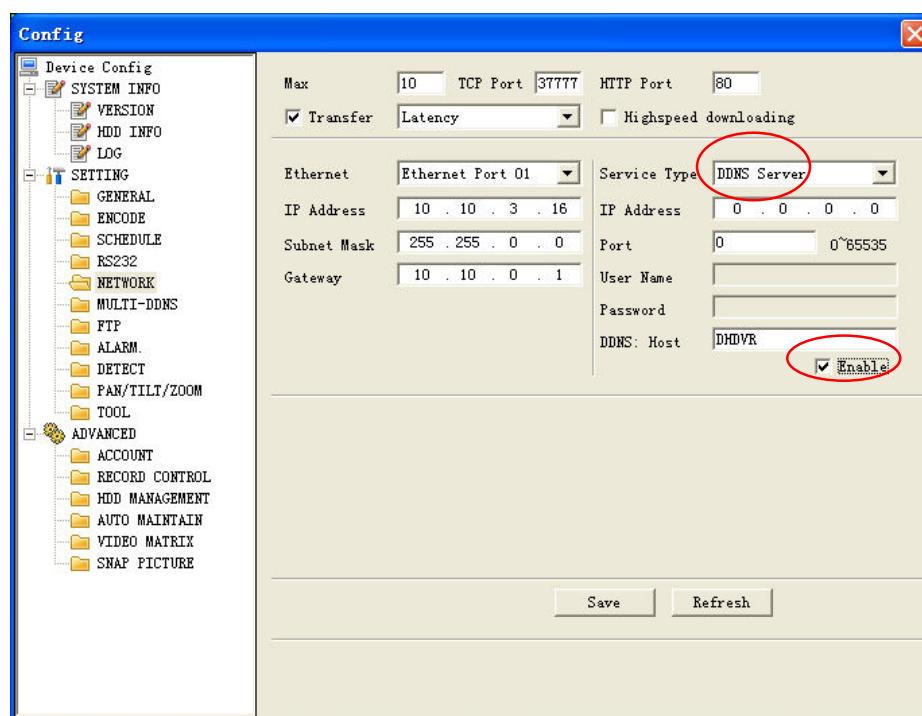


Figure 7-31

● RS232

RS232 includes the following items. See Figure 7-32.

- Function: There are various devices for you to select. The console setting is used to upgrade the device via a serial connection. The keyboard setting is for a special keyboard to control the device.
- Baud rate: You can select proper baud rate.
- Data bit: You can select proper data bit.
- Stop bit: There are three values: 1/1.5/2.
- Parity: there are three choices: none/odd/even.

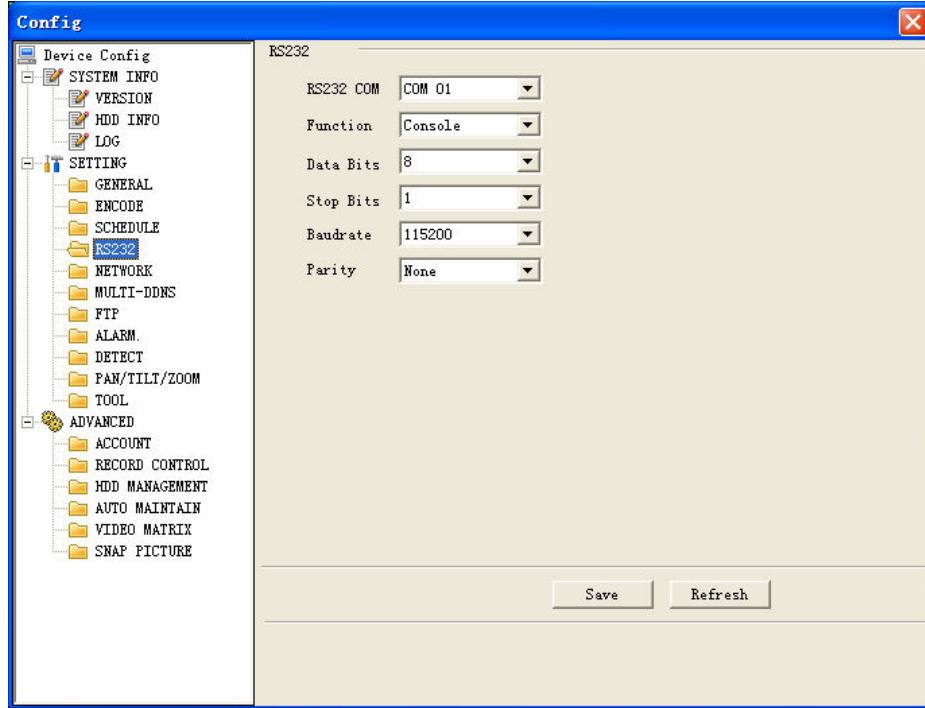


Figure 7-32

- Multi-DDNS

Here you can select a DDNS type to run updates with. See Figure 7-33.

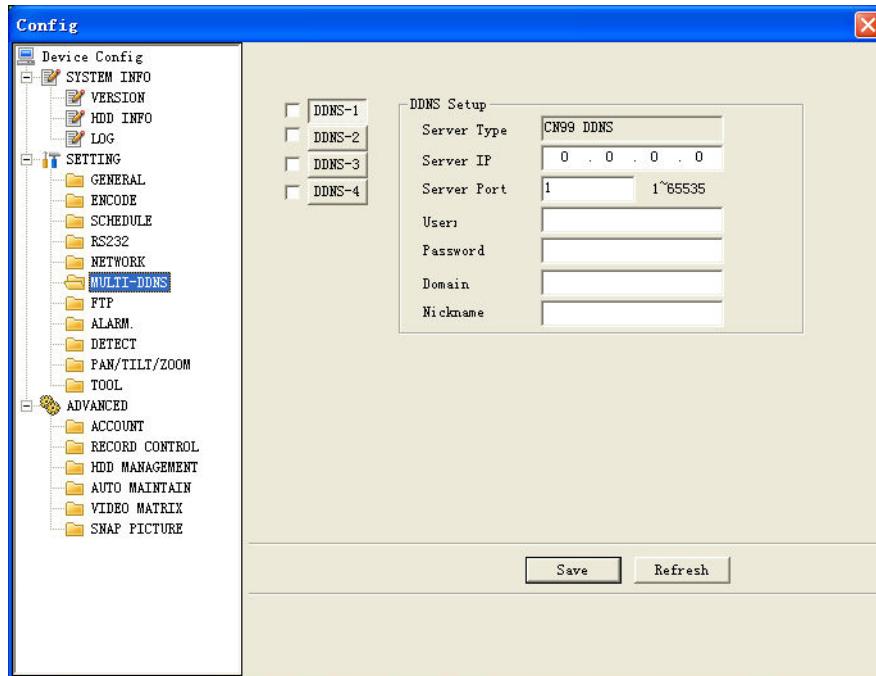


Figure 7-33

- FTP

After completing all required setup for the FTP server, the system will upload scheduled data to the specified FTP server regularly.

In Figure 7-34, you need to input the FTP server address, port, log in user name and password. Also, be sure to specify the destination directory to save files.

- File length: upload file length. When the value is larger than the actual file length, the system will upload the whole file. When this value is smaller than the actual file length, system only uploads the set length and automatically ignores the remaining section.
- When interval value is 0, the system will upload all corresponding files.
- Time period: Click set, you will see an interface as in Figure 7-35. You can check the box to select the file type. System supports multiple choices.

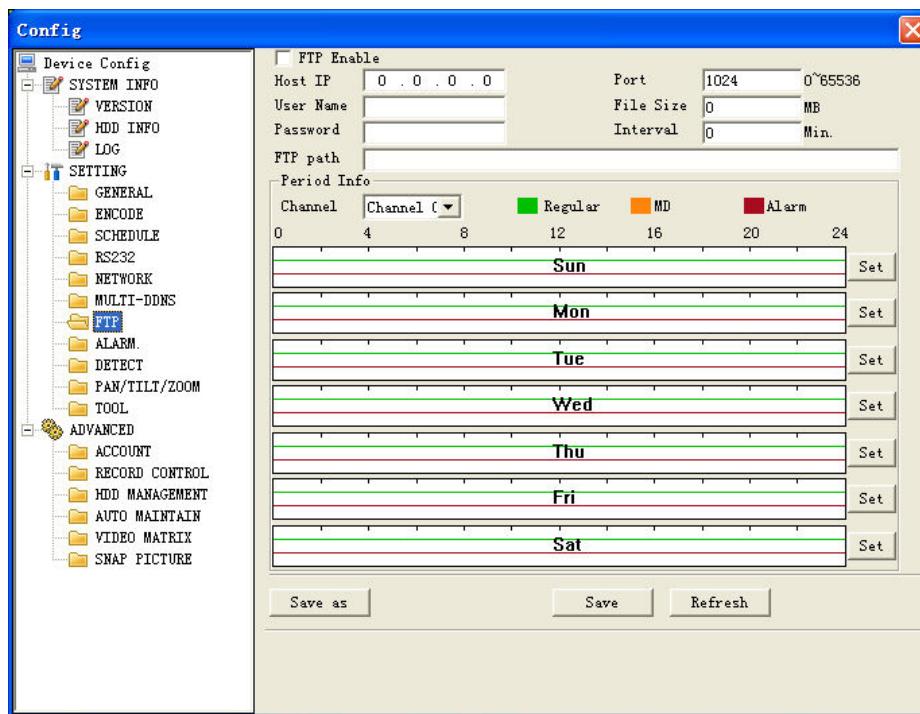


Figure 7-34

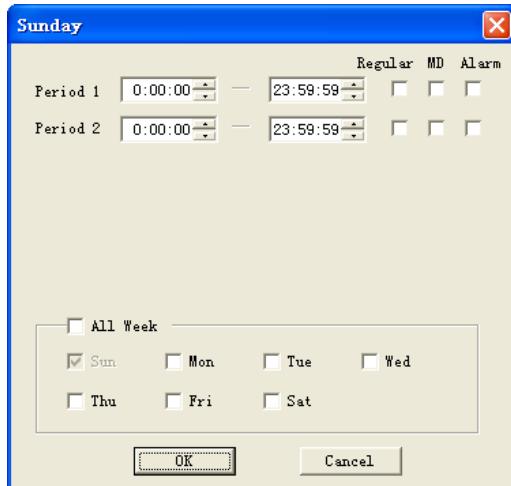


Figure 7-35

● Alarm

Note before alarm setup, you will need to properly connect alarm input and output device, send address and receive address. Click save, confirm current setup.

Alarm setup includes the following items. See Figure 7-36.

- Alarm in: Select channel number.
 - Event type: There are two types: local input/network input.
 - Type: Normal open or normal close.
 - PTZ activation: PTZ activation: Here, you can relate a PTZ preset to a detection event. PTZ presets include functions such as go to a preset location, being a tour or pattern, etc. Click “select”, and you will see an interface as shown in **Error!**
- Reference source not found..**
- Period: Click the set button, and you will see an interface as shown in Figure 7-36. Here you can set business days and non-business days.
 - Show message: the system can provide pop up notifications on the local screen if this function is enabled.
 - Record channel: you can select any channel to record alarm video (or multiple channels). Make sure alarm recording is configured in the schedule menu (Main Menu→Setting→Schedule). Also be sure to select schedule record in the manual record menu(Main Menu→Advance→Manual Record).
 - Latch: when detection is complete, the auto trigger continues detecting for a specified time. The value ranges from 10-300 seconds.
 - Tour: Here you can enable the tour function once an alarm occurs. It is a one-window tour (full-screen): Please go to chapter 5.3.9 Display for tour interval setup.

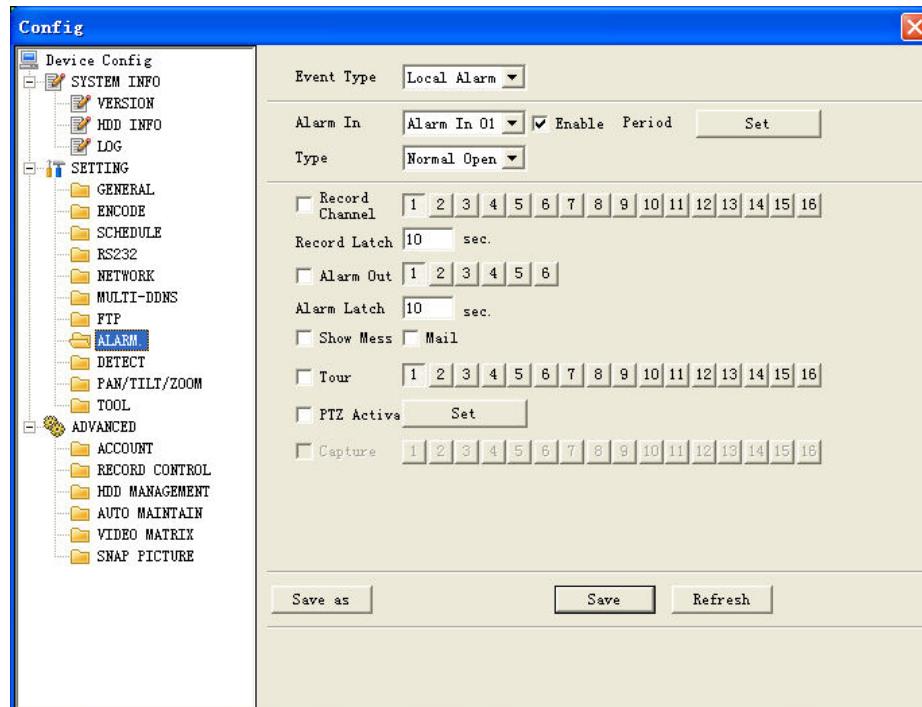


Figure 7-36



Figure 7-37

● Detect

Detect interface is shown as in Figure 7-38.

Here includes the following items:

- ✧ Channel: Select a channel from the dropdown list.
- ✧ Type: There are three detection types: Motion Detection/Video loss/Camera mask detection.
- ✧ Record channel: Here you need to select a channel to record when the event channel (selected above) has any type of detection (Note: if you do not specify a record channel, it will not record the event at all). Make sure you have set MD recording in the schedule interface (Main Menu->Setting->Schedule) and also be sure your manual record setting is set to schedule. (Main Menu->Advanced->Manual Record)
- ✧ Period: This is where you can set a secondary record period. Note: this will not take precedence over the original schedule. Click set, you will see an interface as shown in Figure 7-39. In Figure 7-39, click time set, you can see an interface as shown as in Figure 7-40. Here you can set time period.
- ✧ Sensitivity: There are six levels. The sixth level has the highest sensitivity.
- ✧ Region: This option is used to set the motion detection zones. The interface is shown as in Figure 7-41. There are 330 zones (22*15). Double right click your mouse and you can go to a full-screen display mode. Remember to click OK, in Figure 7-41 to save your motion detection zone setup.
- ✧ Alarm output: Here you can select activated external peripheral devices when alarms occur.
- ✧ Show message. System can alert you on the local screen if you enabled this function.
- ✧ Tour: Here you can enable the tour function when an alarm occurs in the corresponding channel. The system supports multiple-window tours. Go to chapter 5.3.9 Display for tour interval setup.
- ✧ PTZ activation: Click set; you will see an interface as shown in Figure 7-42. The system can go to a corresponding preset when the alarm occurs.

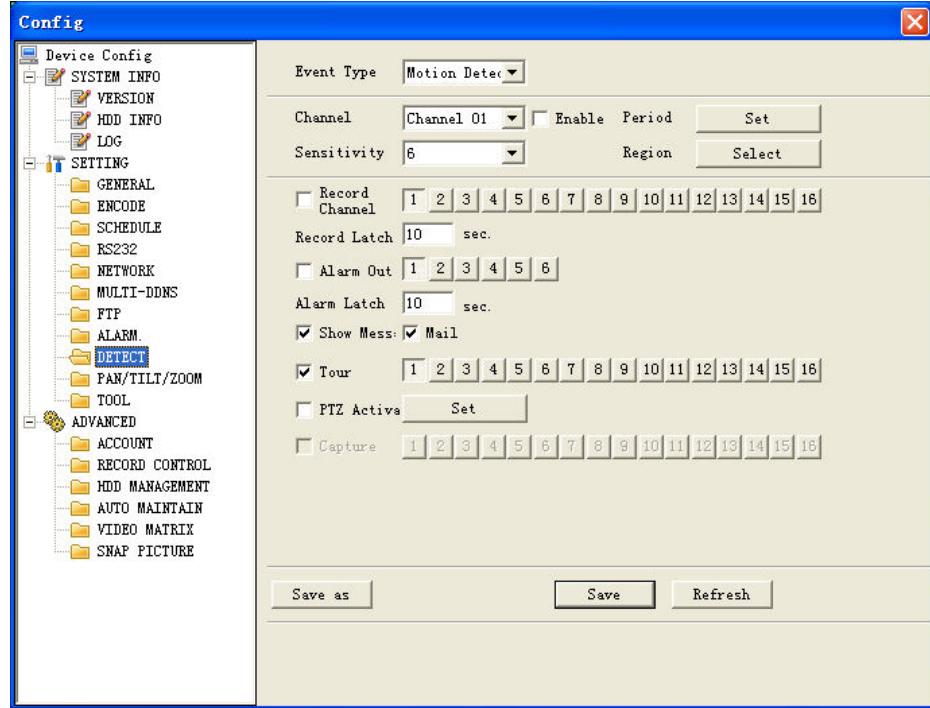


Figure 7-38

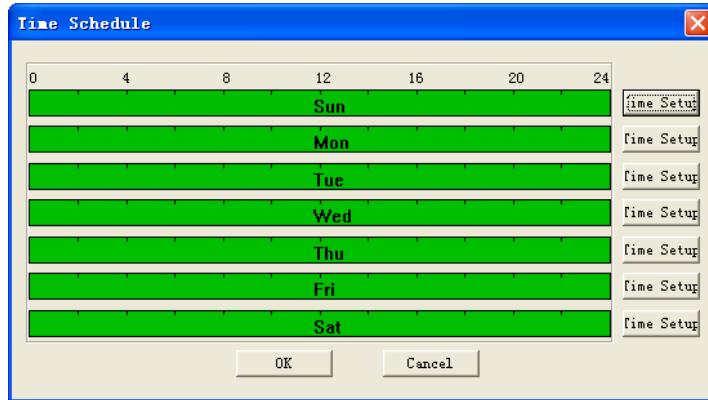


Figure 7-39

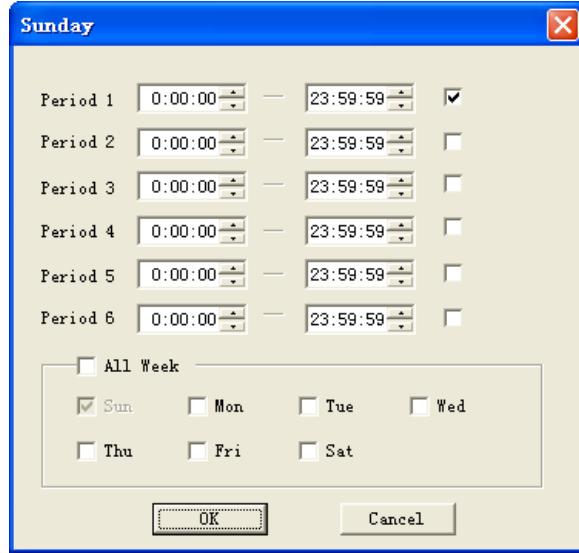


Figure 7-40

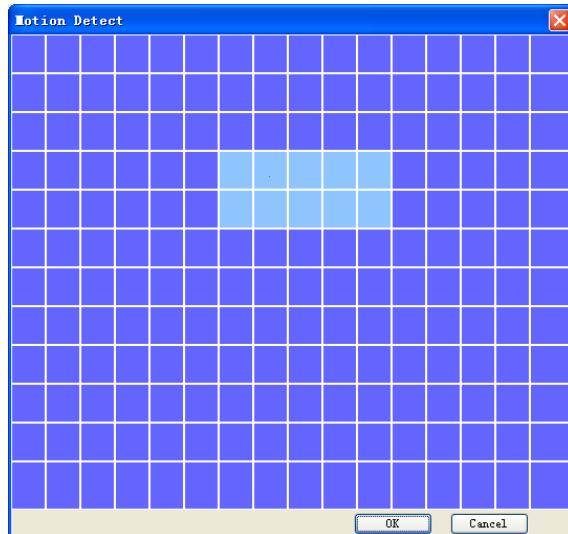


Figure 7-41



Figure 7-42

● Pan/Tilt/Zoom

Pan/Tilt/Zoom interface is shown as in Figure 7-43.

Note: Ensure you have assigned your dome and address at the camera, and all physical connections are correct.

- ✧ Channel: Select the channel that has your PTZ video.
- ✧ Protocol: Select the corresponding dome protocol.(such as Pelco)
- ✧ Address: Set corresponding dome address. Default value is 8. Note: your setup here needs to correspond with your dome address; otherwise you can not control the speed dome.
- ✧ Baud rate: Select the dome baud rate. Default setup is 9600.
- ✧ Data bit: Default setup is 8.
- ✧ Stop bit: Default setup is 1.
- ✧ Parity: Default setup is none.

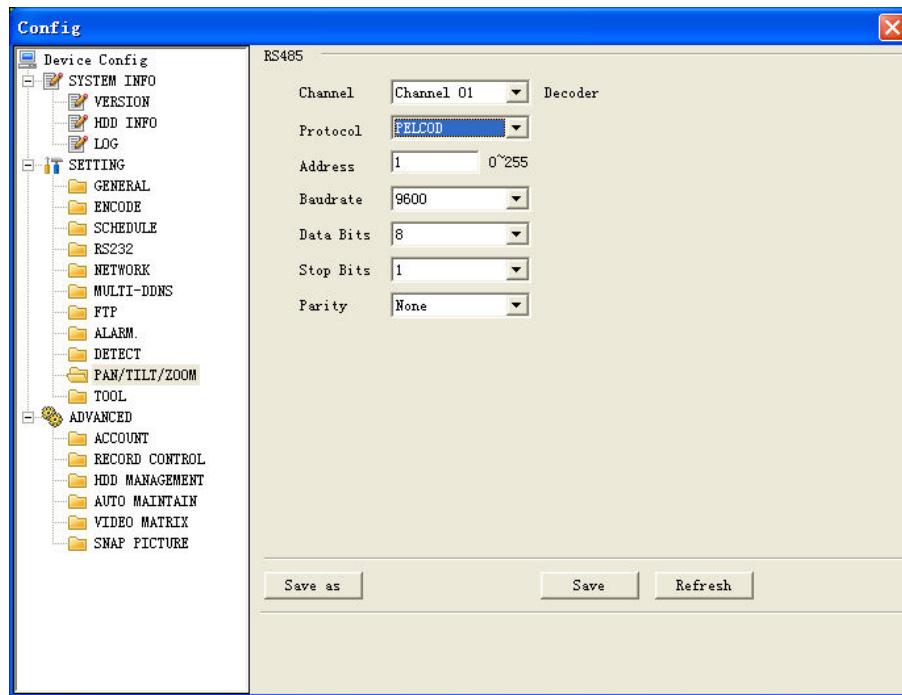


Figure 7-43

● Tool

Here you can export or import configuration information. See Figure 7-44.

Save configuration data: Click export config, to save the current setup as a .CFG file. See Figure 7-45.

Load configuration data: Click import config, to load a .CFG setup file.

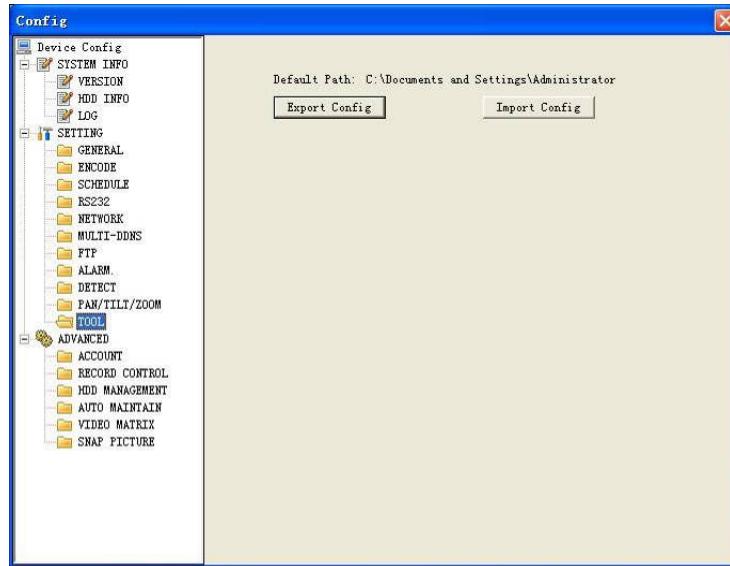


Figure 7-44

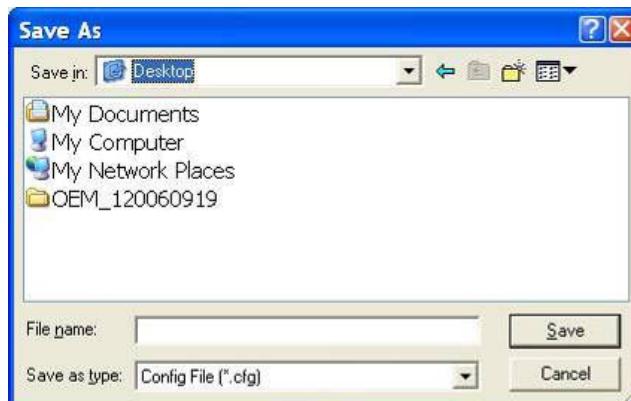


Figure 7-45

7.3.2.1 Advanced

Advanced includes the following items. See Figure 7-46.

- ✧ Account
- ✧ Record control
- ✧ HDD management
- ✧ Video matrix
- ✧ Snap & watermark
- ✧ Auto maintain
- **Account**

Account interface is shown as in Figure 7-46. Here you can add/delete users, add/delete groups, modify user or group rights, modify users passwords.

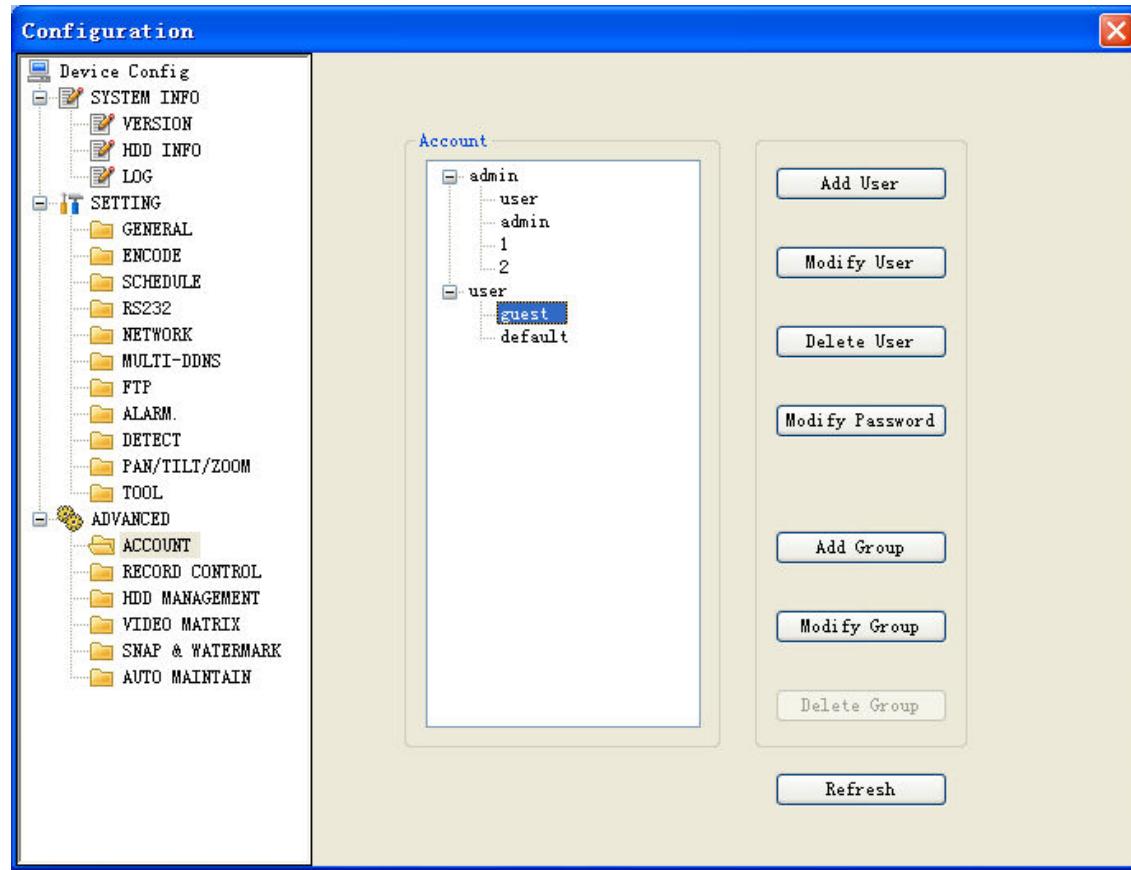


Figure 7-46

To add a group, click add group, and you will see the following interface. See Figure 7-47.

Here you can add one new group, and then select corresponding rights for the users contained within this group.

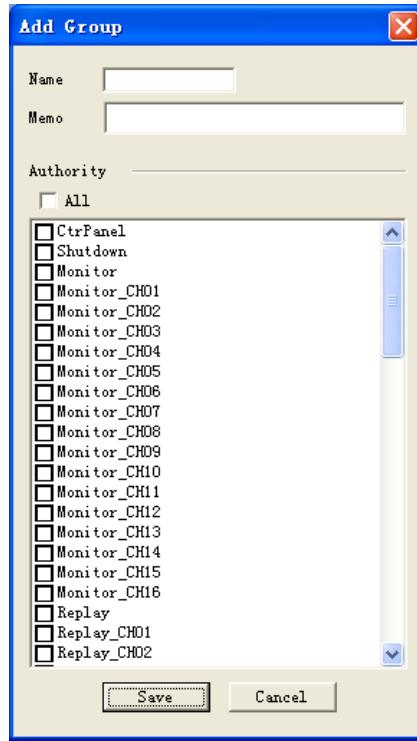


Figure 7-47

To add a user, click add user, and you will see the following interface. See Figure 7-48.

Here you can input a new username and password, and also select corresponding rights. Note: Your user and pass have a max limit of 6 characters and are case sensitive!

Also note that user permissions cannot exceed the group permissions which they are a part of.

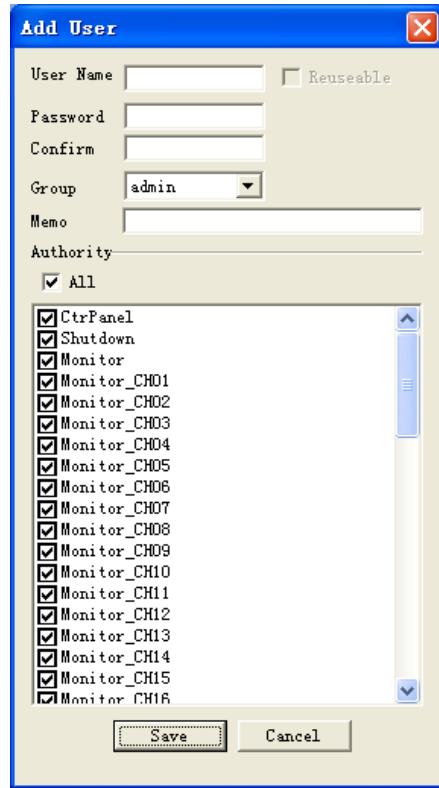


Figure 7-48

● Record Control

Record control interface is shown as in Figure 7-49.

Record control: Here you can adjust the record state for a corresponding channel.

Alarm output channel: Here you can select an alarm output channel to trigger. The DVR output channel can not support a large overload (It must be less than 1A). Too heavy of a current may result in relay damage. Use contactor if necessary.

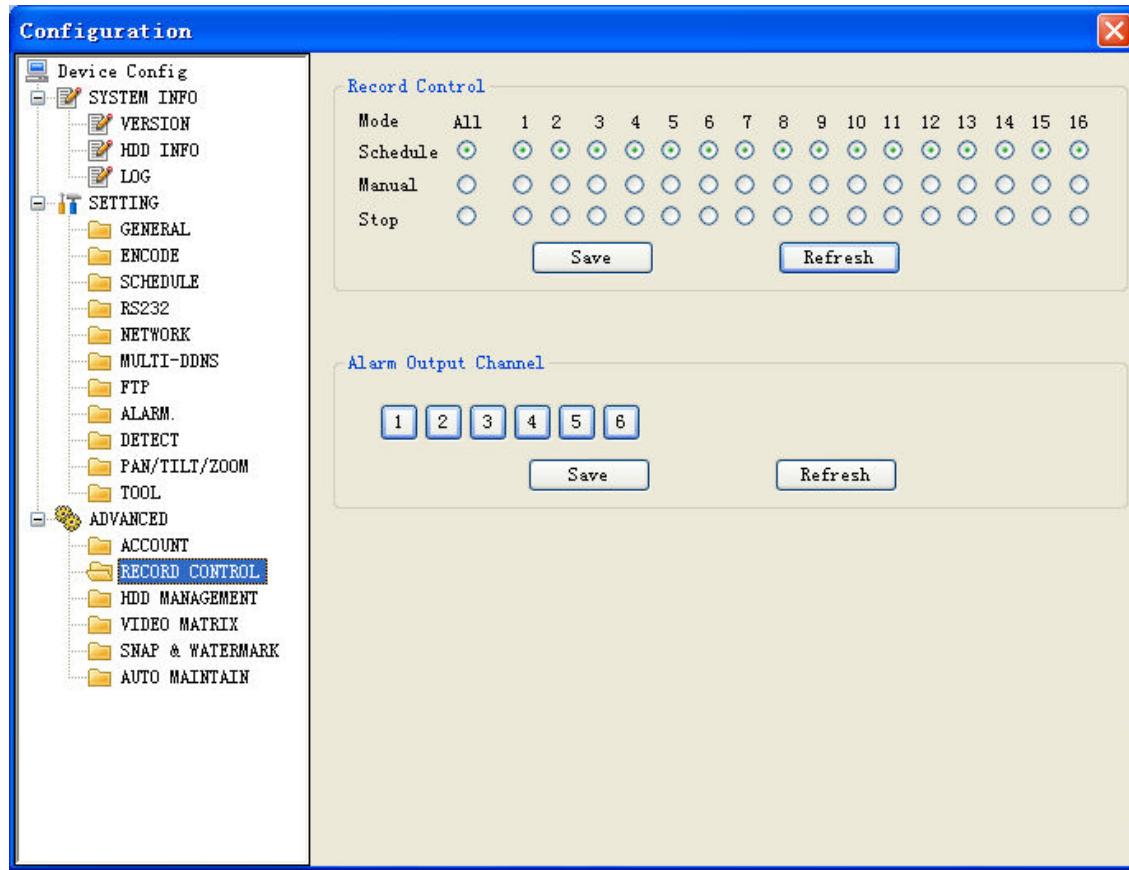


Figure 7-49

● HDD management

Select the HDD first, and then you can see the items on your right have become enabled. You can check the corresponding option here. See Figure 7-50.

After you have completed setup, click control HDD – you will see the DVR restart itself.

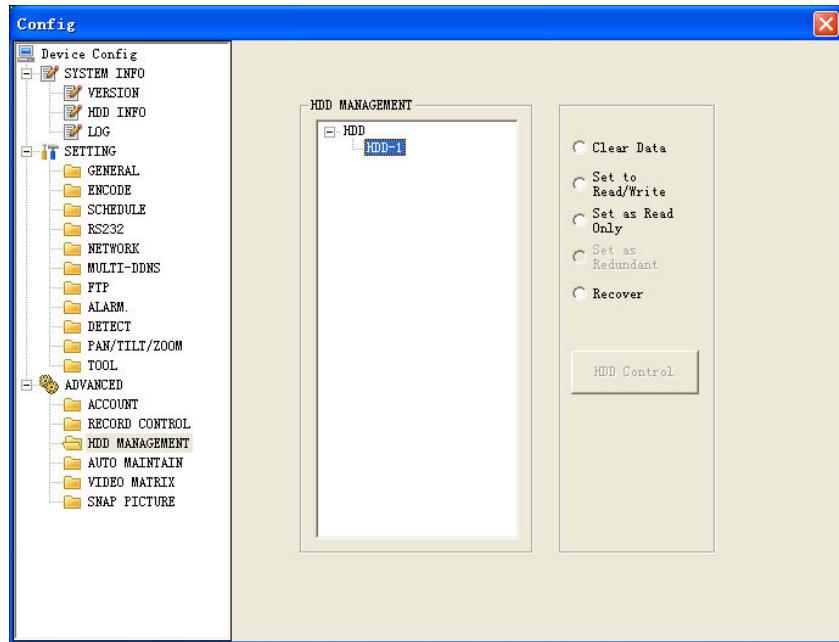


Figure 7-50

● Auto maintenance

Auto maintenance interface is shown as in Figure 7-51. Here you can enable/disable auto reboot or the auto deletion of old files. The DVR needs to support this operation to function properly.

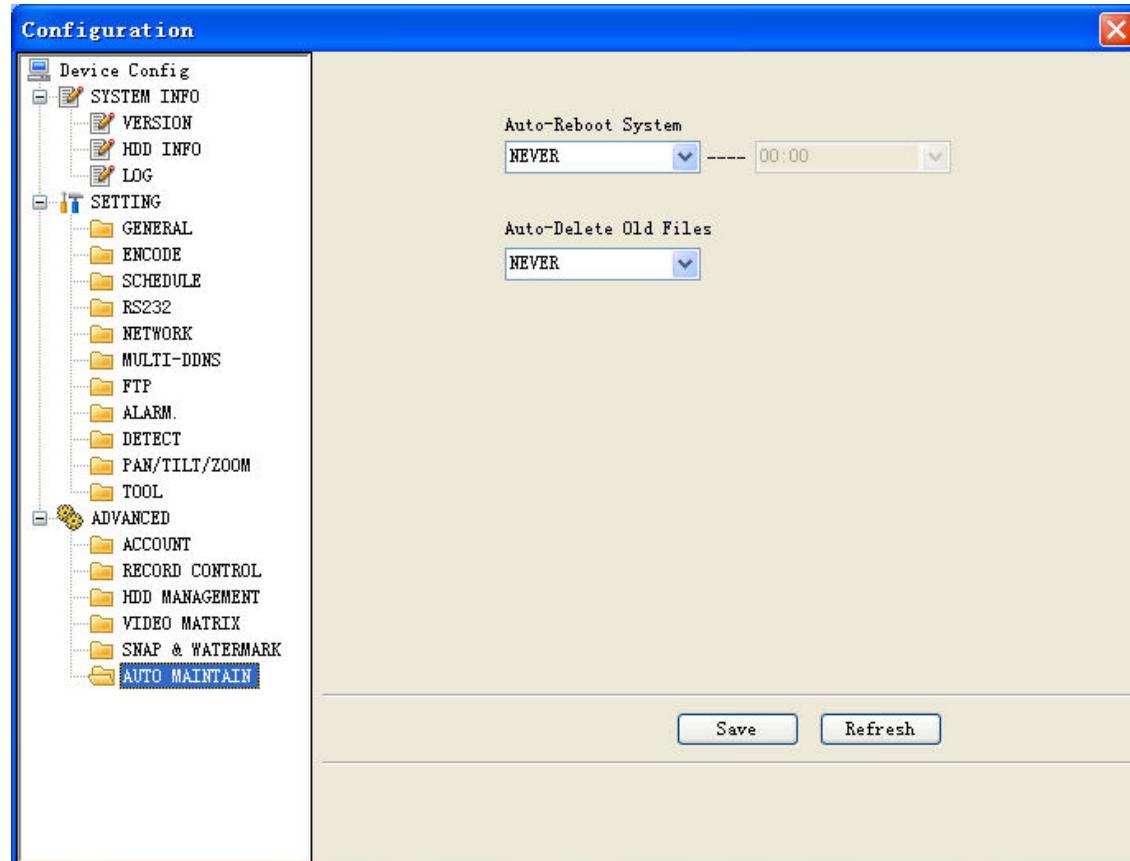


Figure 7-51

● Video Matrix

Video matrix interface is shown as in Figure 7-52. The DVR needs to support this function to work properly. From this menu, you are able to choose certain channels that you wish to be displayed in a sequential fashion and assign them to a specified matrix output.

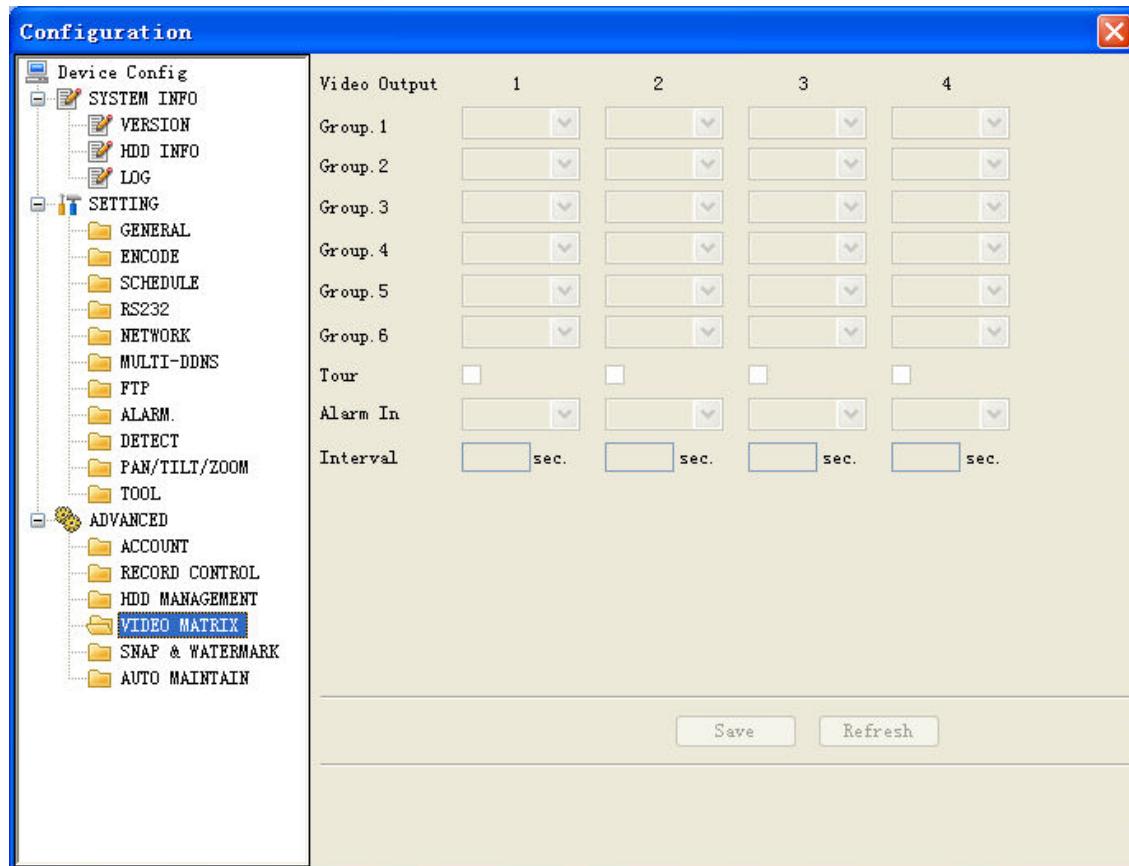


Figure 7-52

● Snap & Watermark

Snap & watermark interface is shown as in Figure 7-53. The DVR needs to support this function to work properly.

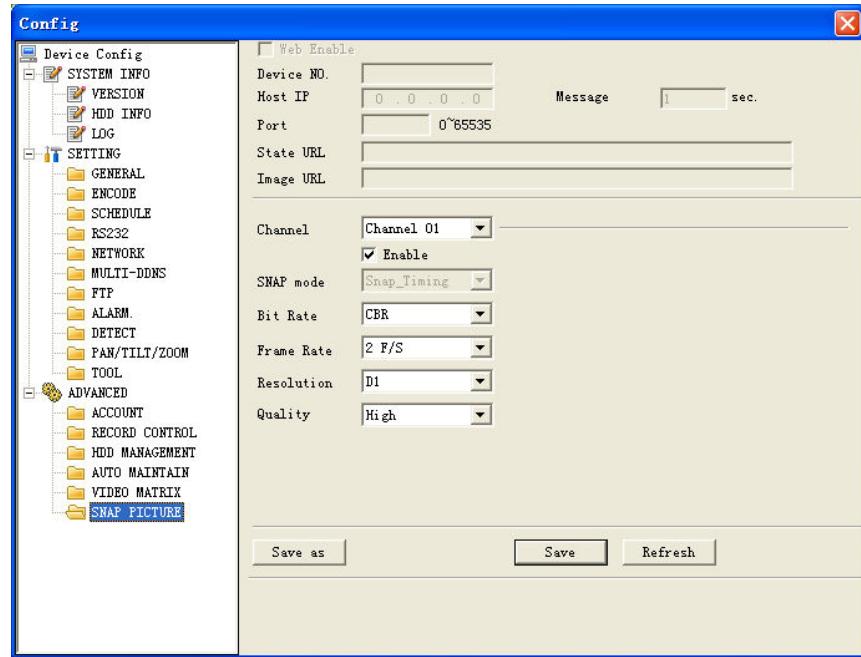


Figure 7-53

7.4 Playback

Here you can specify a video type, channel number and a time to search for desired files you wish to playback.

Click playback, the interface is shown as in Figure 7-54

Once you've chosen a time, date, and channel, click on 'search'. The results will appear as in Figure 7-54.

Use page up/down key to view the search results.

Double click the file name to start the playback.

Search					
Type	Parameter			Operation	
<input checked="" type="radio"/> Record	Begin Time	2008- 4-15	10:43:07	<input type="button" value="Search"/>	<input type="button" value="Download"/>
<input type="radio"/> Alarm	End Time	2008- 5-30	10:43:07	<input type="button" value="Playback"/>	<input type="button" value="Open Local Record"/>
<input type="radio"/> Motion	Channel	1		<input type="button" value="WaterMark"/>	
<input type="radio"/> Local					
<input type="radio"/> Picture					
<input type="radio"/> Card					
Multiple-channel Playback					
<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
<input type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12
<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16		
S/N	File Size(KB)	Begin Time	End Time	Record Type	
1	44451	2008-4 13:00	2008-5-4 14:00	Common Re...	
2	44376	2008-5 14:00	2008-5-4 15:00	Common Re...	
3	44440	2008-5-4 15:00	2008-5-4 16:00	Common Re...	
4	44431	2008-5-4 16:00	2008-5-4 17:00	Common Re...	
5	44199	2008-5-4 17:00	2008-5-4 18:00	Common Re...	
6	44460	2008-5-4 18:00	2008-5-4 19:00	Common Re...	
7	44464	2008-5-4 19:00	2008-5-4 20:00	Common Re...	
8	44486	2008-5-4 20:00	2008-5-4 21:00	Common Re...	
9	44450	2008-5-4 21:00	2008-5-4 22:00	Common Re...	
10	44604	2008-5-4 22:00	2008-5-4 23:00	Common Re...	
11	44595	2008-5-4 23:00	2008-5-5 0:00	Common Re...	
12	44351	2008-5-5 0:00	2008-5-5 1:00	Common Re...	
13	44362	2008-5-5 1:00	2008-5-5 2:00	Common Re...	
14	44475	2008-5-5 2:00	2008-5-5 3:00	Common Re...	
15	44498	2008-5-5 3:00	2008-5-5 4:00	Common Re...	
16	44448	2008-5-5 4:00	2008-5-5 5:00	Common Re...	
17	44447	2008-5-5 5:00	2008-5-5 6:00	Common Re...	

Figure 7-54

In the search result interface, you can select one or more files to download to your local PC.

The playback bar is shown as below. See Figure 7-55.

- 1: Play
- 2: Pause
- 3: Stop
- 4: Slow play
- 5: Fast play

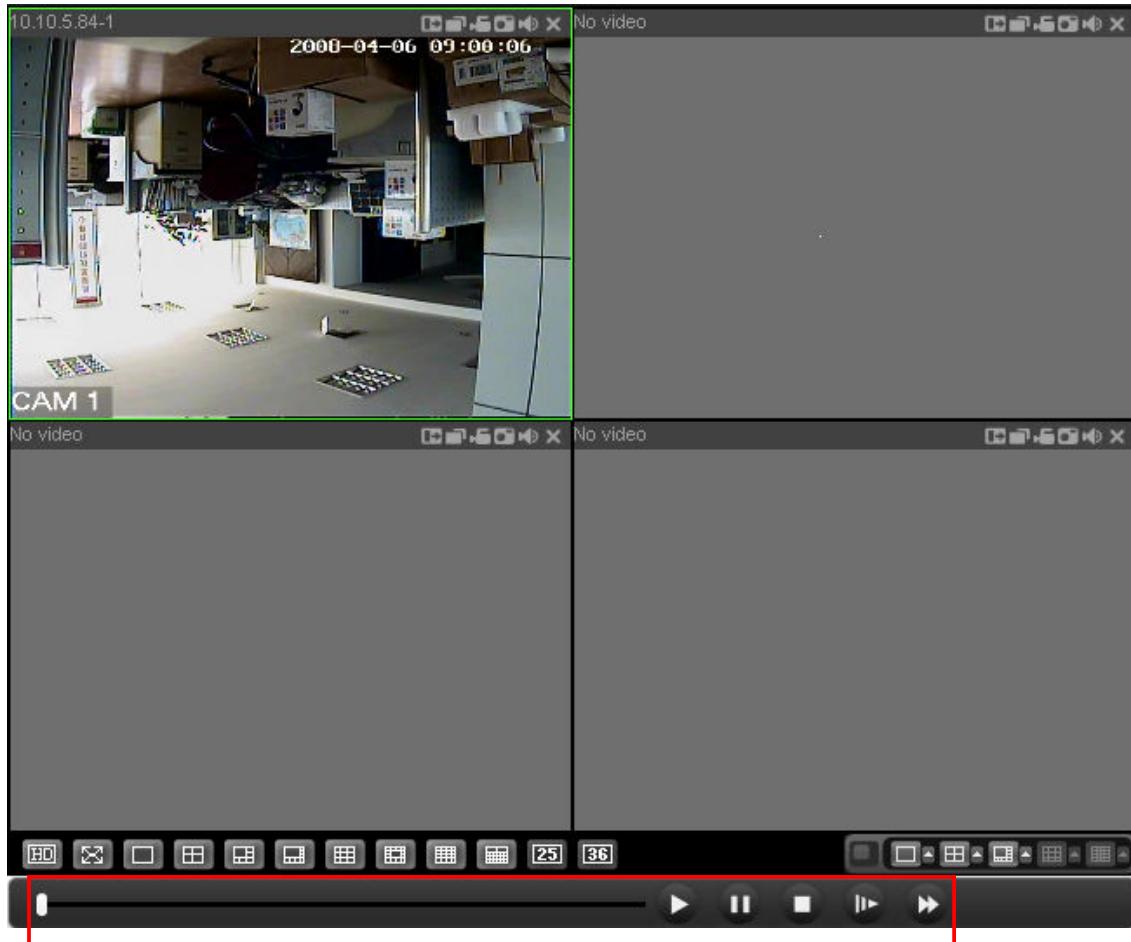


Figure 7-55

7.4.1 Download

Select one or more files you want to download and then click download. The System will pop up a dialogue box asking you to specify a destination directory. See Figure 7-56.

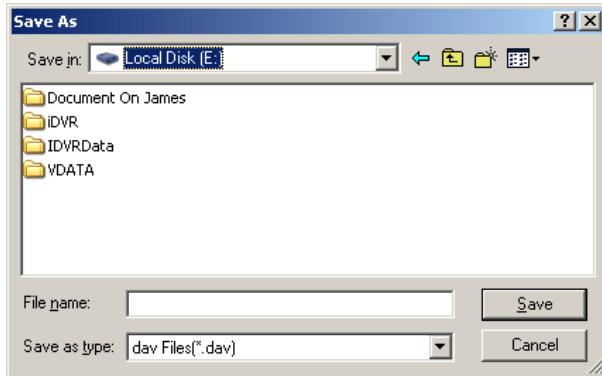


Figure 7-56

Now, you can input a file name and click save to backup the file to your local pc. During the download, there is a progress bar for reference, and you will also see the download button becomes a stop button. See Figure 7-57.

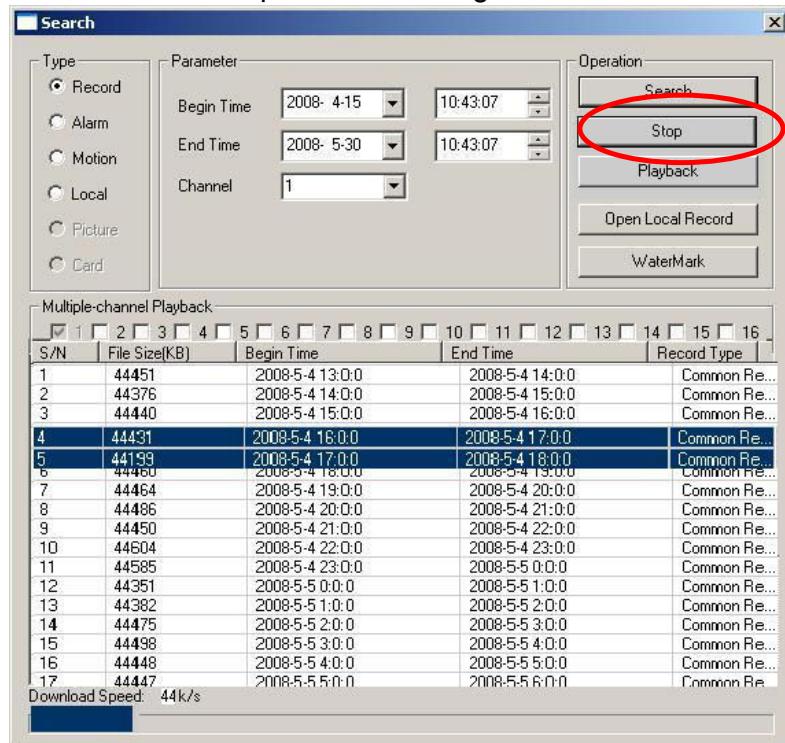


Figure 7-57

7.4.2 Watermark

Click watermark, to see an interface is shown as in Figure 7-58.

Here you can select local recorded file and then click verify, to check watermark information. You can see corresponding information in the watermark juggle column.

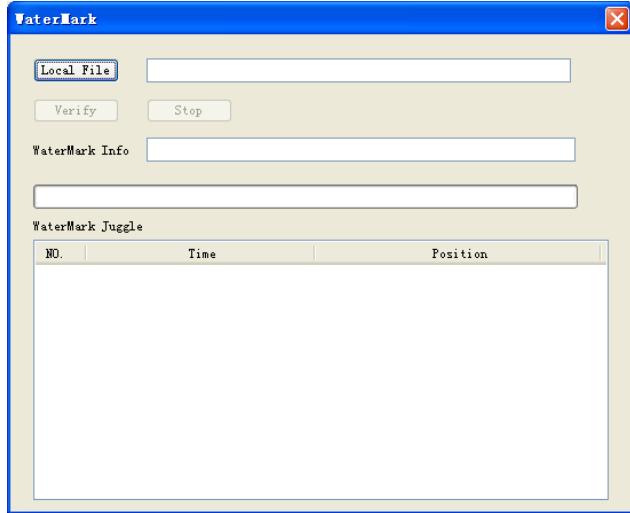


Figure 7-58

7.5 Event

Here you can set alarm type and alarm prompt audio file. See Figure 7-59.

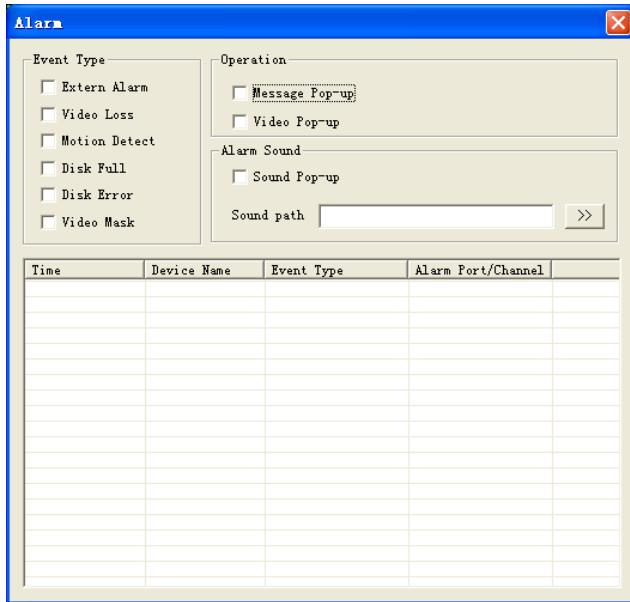


Figure 7-59

7.6 Info

Click info to view current web client information. See Figure 7-60.



Figure 7-60

7.7 Log out

Click log out and the system will go back to the log in interface. See Figure 7-61.

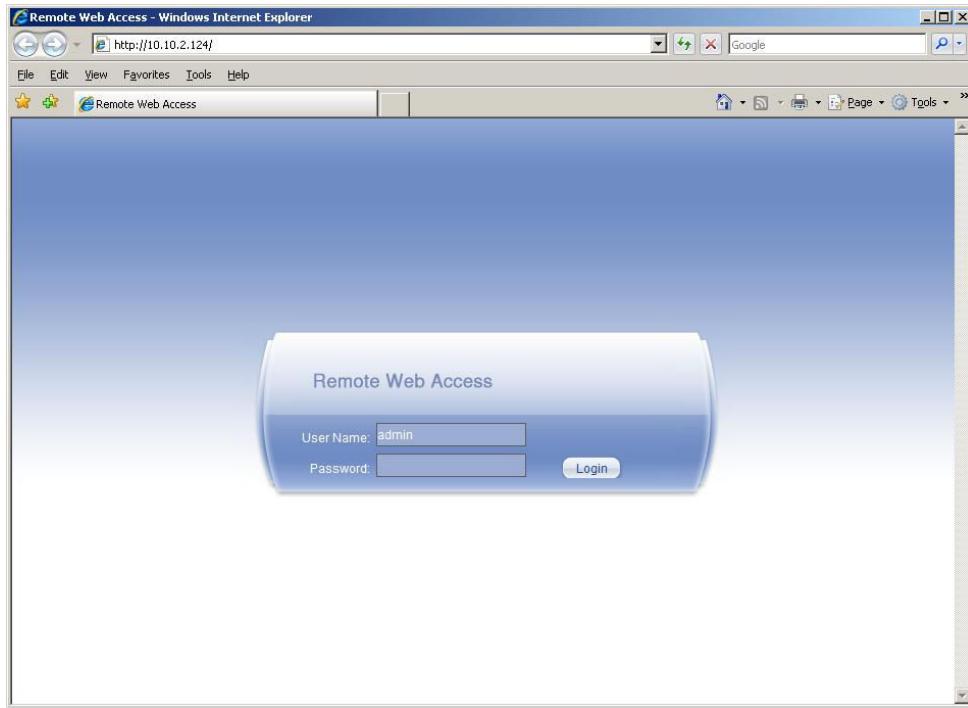


Figure 7-61

7.8 Un-install Web Control

You can use web un-install tool “uninstall web.bat” to un-install web control.

Note, before you un-install, close all web pages first. Otherwise the un-installation may result in error.

8 Enterprise Professional Surveillance System

In this chapter, we introduce how to add devices and how to enable monitoring function using the client software. For detailed operation, refer to enterprise professional surveillance system user's manual.

8.1 Log in

Double click the enterprise professional surveillance platform icon () from your desktop. If it is your first time using the software, you will be prompted to choose a language. See Figure 8-1.



Figure 8-1

After selecting a language, click ok to proceed to the login screen. Here you can input a user name and password to log in to your selected server. The log in interface is shown as in Figure 8-2.

If it is your first time to use the system, click on 'add' to add your device. The defaulted central control server is named 'Local'.

System default username and password are both admin.

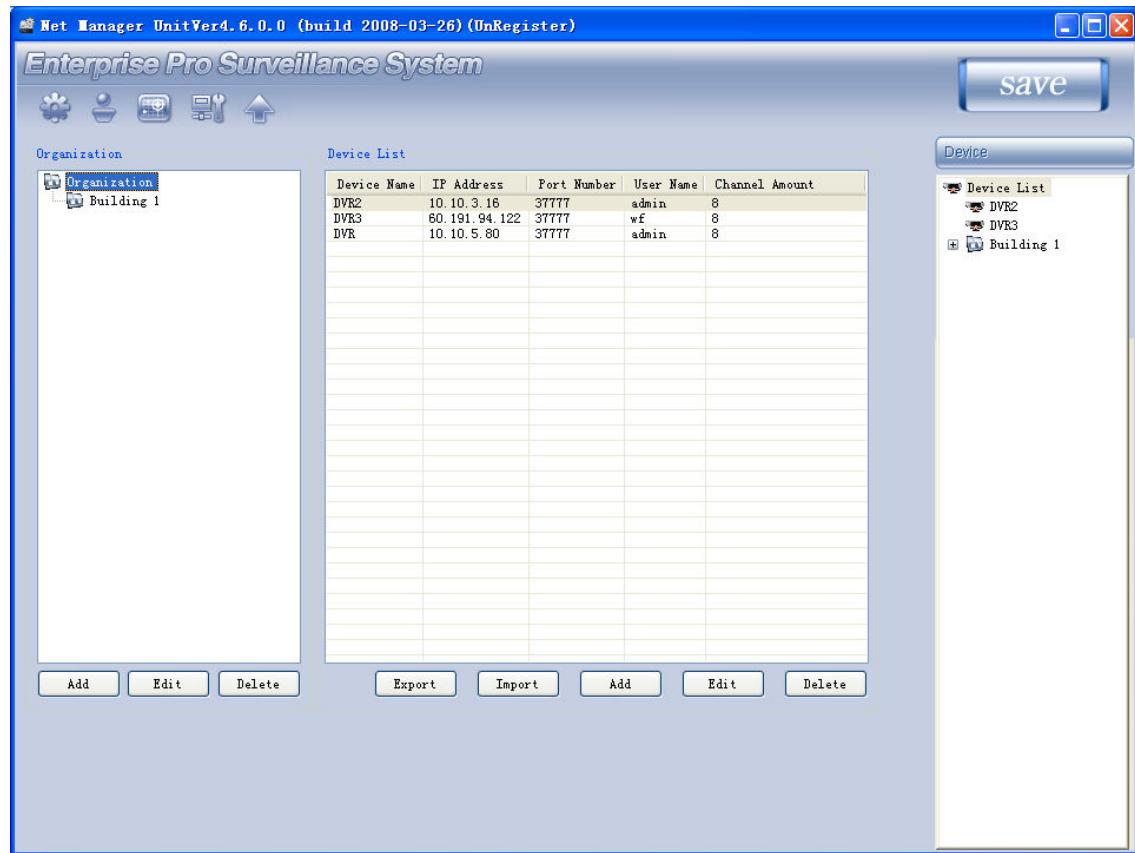
Note: For security reasons, we recommend you modify the password after your first login.



Figure 8-2

8.2 Add New Device

After successfully logging in, we need to create a new connection for your DVR. Click Device Management from the icon group towards the right side, above the device list. Add a new organization first by clicking the add button on the left hand side. Now, click add under the device list column to add in the host information of the DVR you wish to connect to. Once finished, select 'save' in the upper right part of your screen. For more information about this operation and more about this software, please refer to its own manual.



8.3 Viewing Live Cameras

After successfully creating a new connection for the DVR, select the device and then click connect/disconnect button () .

Select the channel you wan to view, click connect/disconnect, () again.

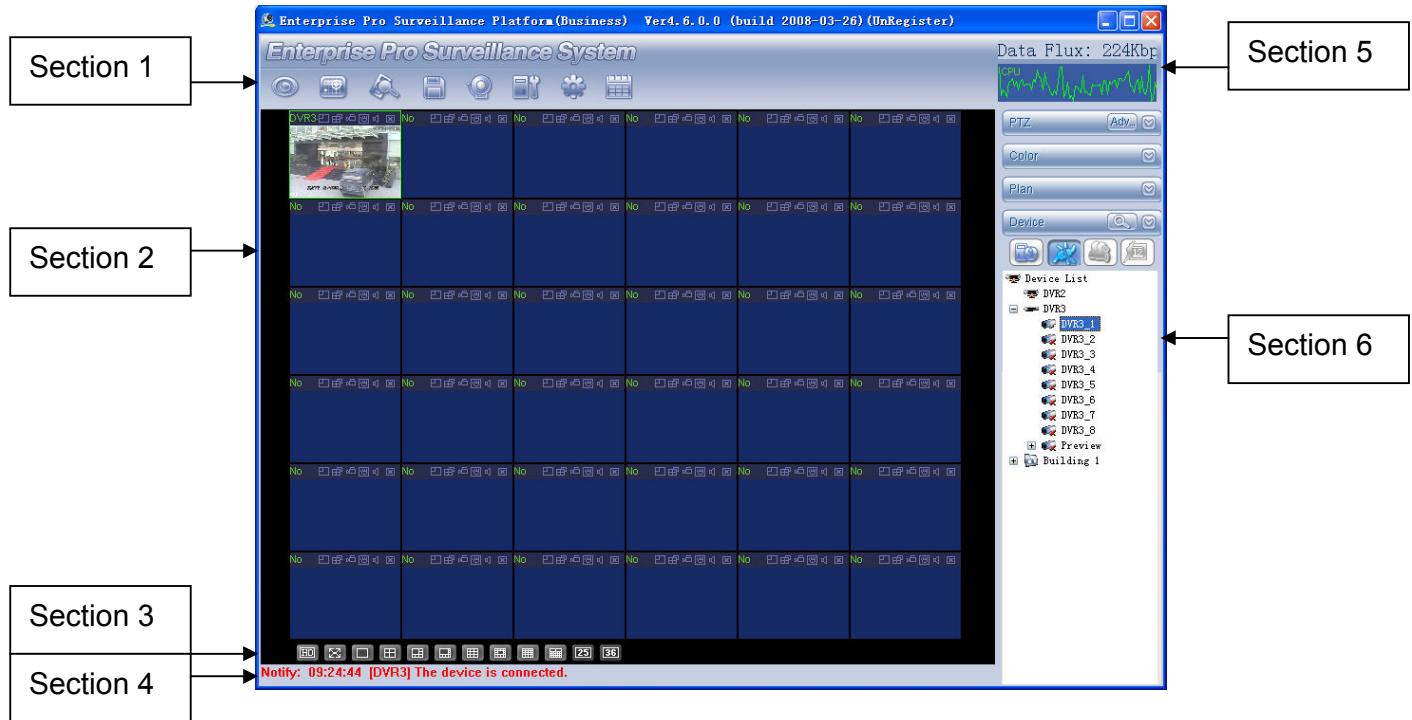


Figure 8-3

There are total six sections:

- Section 1: There are eight function keys: monitor, E-map, record, save, alarm, configuration, log and system.
- Section 2: This is where you can view channel video.
- Section 3: This is where you can select display mode. System supports various display modes. HD item is for you to select priority between network latency and video fluency.
- Section 4: This is where you can view current help information.
- Section 5: Here is the display for data flux and CPU status.
- Section 6: There are four function buttons: PTZ, color, device, and plan. For best performance, we recommend resolution 1024*768.

Select a device name and then click connect/disconnect, you will connect to the current selected DVR. You will notice the red-cross below the name disappeared.

Select a window on you left side (Section-2) and then double click the channel name on you right hand (Section-6), you will notice the corresponding video in the highlighted window.

Please refer to Figure 8-4 for connection/disconnection information.

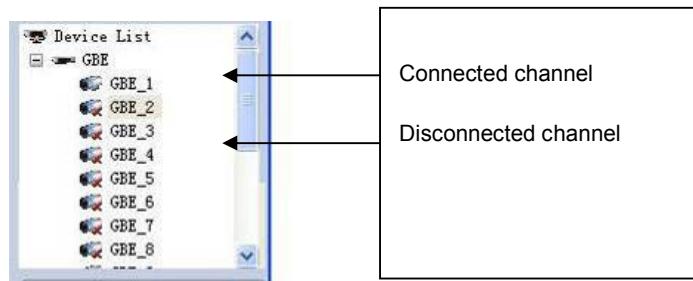


Figure 8-4

Figure 8-5



9 RS232 Operation

9.1 Network Connection

Before serial port operation, connect the matrix device with the DVR through the RS232 port. Now, set the DVR's serial port protocol to the corresponding matrix device protocol.

Note: Contact your local retailer to confirm whether the DVR supports matrix protocol or not.

9.2 Keyboard

The control keyboard is very convenient for multi-DVR control, menu options and PTZ control. Select **keyboard control** from the system **setting→RS232→function**, **and then** set the corresponding baud rate. Connect the DVR RS232 port to the converters DSub 25-pin RS232 port, and finally specify proper control addresses for all connected DVRs (Navigate from Main Menu→Settings→General). Now you are able to input the DVR control address and use the keyboard keys to control menu items, or any PTZ. See Figure 9-1.

Note: The keyboard works only when ACT light is on.

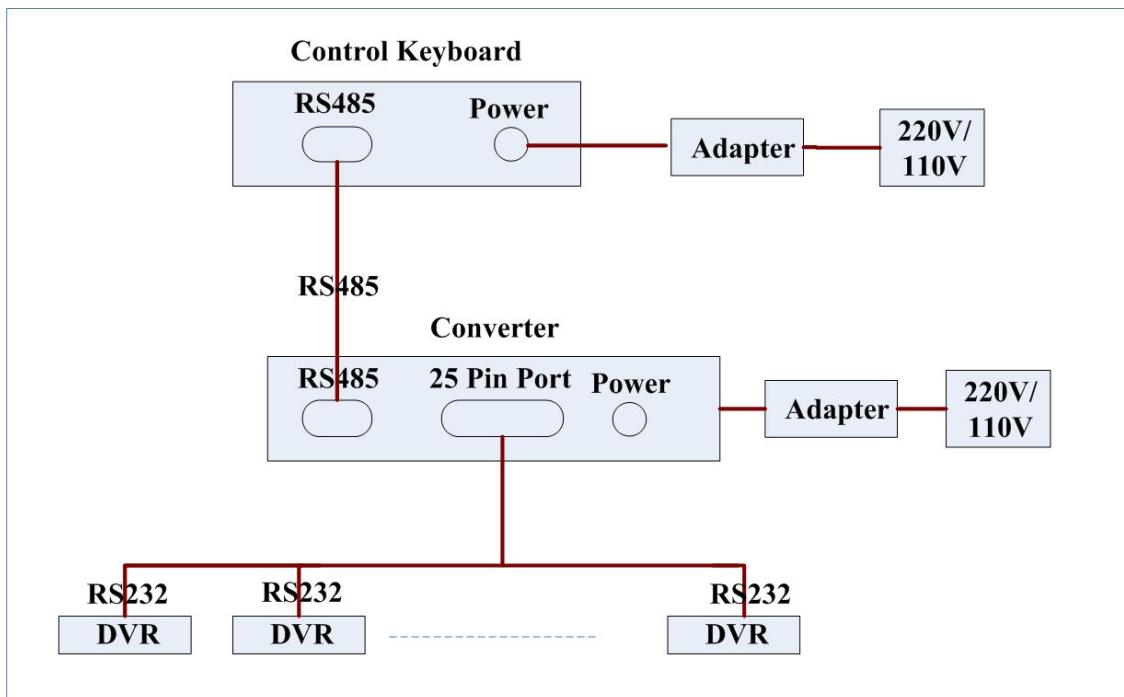


Figure 9-1

10 FAQ

1. DVR does not boot up properly.

These are the possibilities:

- Input power is incorrect.
- The power cord is incorrectly seated.
- Power switch is damaged.
- HDD malfunction or something wrong with HDD ribbon.
- Seagate DB35.1, DB35.2, SV35 or Maxtor 17-g has compatibility problem.
Upgrade to the latest version to solve this problem.
- Front panel circuit board is damaged.
- Main board is damaged.

2. DVR often automatically shuts down or stops running.

These are the possibilities:

- Input voltage is not stable or it is too low.
- HDD malfunction or something wrong with the ribbon cable.
- The working environment is too harsh. It's either operating in too cold or too hot of an area.
- Accumulation of too much dust in the unit.
- Hardware malfunction.

3. The system can not detect hard disk.

These are the possibilities:

- HDD is broken. Physically or logically damaged.
- HDD ribbon is damaged.
- HDD cable connection or power connection is loose.

4. There is no video seen whether it is one-channel, multiple-channel or all-channel outputs.

These are the possibilities:

- Check all video connections.
- There is either no video input signal or it is too weak.
- Check if privacy mask setup is turned on for certain channels.
- Check for indicator icons on screen. A lock icon represents no right to view, and a question mark represents no video signal.
- DVR hardware malfunction.

5. Video output is distorted.

These are the possibilities:

- Use only one primary output at a time. Either the VGA output or the first composite output.
- The DVR and monitor resistance are not compatible.
- Video transmission is too long and may be degrading the signal.
- The monitor's color or brightness is not correctly setup.

6. Can not search local records.

These are the possibilities:

- HDD ribbon is loose or damaged.
- HDD is physically or logically damaged.
- The recorded file has been overwritten.
- Record function has been disabled.

7. Video is distorted when searching local records.

These are the possibilities:

- Video quality setup is too low.
- There is a mosaic in full screen. Restart the DVR to solve this problem.
- HDD data ribbon malfunction.
- HDD malfunction.
- DVR hardware malfunction.

8. There is no audio when monitoring. (Live/Playback)

These are the possibilities:

- Audio inputs could be loose.
- Audio device could have incorrect power.
- Audio cable is damaged.
- DVR hardware malfunctions.

9. There is audio when monitoring but there is no audio with system playback.

These are the possibilities:

- Setup is incorrect. Enable audio recording from the Encode menu.

10. Time display is not correct.

These are the possibilities:

- Setup is incorrect. Adjust the current time from the General menu.
- CMOS battery failing or depleted. Replace with a CR-2032 style battery.

11. DVR can not control PTZ.

These are the possibilities:

- PTZ control setup, connection or installation is incorrect.
- PTZ dome setup is incorrect.
- PTZ ID and DVR control address don't match. (Change in Settings→Pan/Tilt/Zoom)
- When there are several decoders, add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the feedback or impedance. Otherwise the PTZ control will be unstable.
- The distance is too far for data communication.

12. Motion detection function does not work.

These are the possibilities:

- Period setup is incorrect.

- Motion detection zone masking setup is incorrect.
- Sensitivity is too low.

13. Can not log in to client-end or web.

These are the possibilities:

- Windows 2000 or above are the only supported operating systems.
- ActiveX control has been disabled.
- DX8.1 or higher is required. Upgrade display card driver to the newest available.
- Network connection error.
- Physical network setup error.
- Password or user name is invalid.
- Client-end is incompatible with the DVR unit.

14. There is only mosaic. No video when preview or playback file remotely.

These are the possibilities:

- Network latency is not good.
- Client-end resources are limited.
- There is privacy mask or channel protection setup.
- Current user has no right to monitor.
- DVR local video output quality is poor.

15. Network connection is not stable.

These are the possibilities:

- The network connection itself is unstable.
- IP address conflict.
- MAC address conflict.
- PC or DVR network card is bad.

16. Burn error /USB backup error.

These are the possibilities:

- System is using too much CPU resources. Stop recording first and then begin backup.
- Data amount exceeds backup device capacity. You will receive “Not enough space!”.
- Backup device is not compatible.
- Backup device is damaged.

17. Keyboard can not control DVR.

These are the possibilities:

- DVR serial port connection is incorrect.
- Address is not correctly setup with either the DVR or the keyboard.
- When there are several converters, the power supply may not be sufficient.
- Transmission distance is too far.

18. Alarm signal can not be disarmed.

These are the possibilities:

- Alarm setup is incorrect.
- Alarm output has been triggered manually.
- Input device error or connection is not correct. Check all terminated connections.

19. Alarm function can not be armed.

These are the possibilities:

- Alarm setup is incorrect.
- Alarm cable connection is not properly seated in the respective terminals.
- Alarm input signal is incorrect.
- There are two loops connected to one alarm device. Correct the loop.

20. The Remote control does not work.

These are the possibilities:

- Remote control address is not correct. Press 'RC' on the remote, and type the default address (8)
- Distance is too far or control angle is too narrow.
- Remote control battery power is low.
- Either the remote control is damaged or the DVR front panel is damaged.

21. Record storage period is not enough.

These are the possibilities:

- Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- HDD capacity is not enough. Add additional hard drive space.
- HDD is damaged.

22. Can not playback the downloaded file.

These are the possibilities:

- There is no media player. Refer to our support page to download the newest version of media player.
- Make sure you have the newest graphical driver issued to your video card.
- There is no DivX503Bundle.exe control (CODEC) when you play the file converted to an AVI file via your defaulted media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. Lost local menu operation password or network password

Contact your local service engineer or our sales person for help. We can guide you to solve this problem. Only authorized vendors will be able to receive help on this topic.

Slight difference may be found in user interface. All the designs and software here are subject to change without prior written notice.

Appendix A HDD Capacity Calculation

Calculate total capacity needed by each DVR according to video recording (video recording type and video file storage time).

Step 1: According to Formula (1) to calculate storage capacity q_i that is the capacity of each channel needed for each hour, unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i means the bit rate, unit Kbit/s

Step 2: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity m_i , which is storage of each channel needed unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula:

h_i means the recording time for each day (hour)

D_i means number of days for which the video shall be kept

Step 3: According to Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^c m_i \quad (3)$$

In the formula: c means total number of channels in one DVR

Step 4: According to Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in DVR during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^c m_i \times a\% \quad (4)$$

In the formula: $a\%$ means alarm occurrence rate

Appendix B Compatible USB Drive List

NOTE: upgrade the DVR firmware to latest version to ensure the accuracy of the table below. If you use the USB drive, confirm the format FAT or FAT32.

Manufacturer	Model	Capacity
Sandisk	Cruzer Micro	512M
Sandisk	Cruzer Micro	1G
Sandisk	Cruzer Micro	2G
Sandisk	Cruzer Freedom	256M
Sandisk	Cruzer Freedom	512M
Sandisk	Cruzer Freedom	1G
Sandisk	Cruzer Freedom	2G
Kingston	DataTraveler □	1G
Kingston	DataTraveler □	2G
Kingston	DataTraveler	1G
Kingston	DataTraveler	2G
Maxell	USB Flash Stick	128M
Maxell	USB Flash Stick	256M
Maxell	USB Flash Stick	512M
Maxell	USB Flash Stick	1G
Maxell	USB Flash Stick	2G
Kingax	Super Stick	128M
Kingax	Super Stick	256M
Kingax	Super Stick	512M
Kingax	Super Stick	1G
Kingax	Super Stick	2G
Netac	U210	128M
Netac	U210	256M
Netac	U210	512M
Netac	U210	1G
Netac	U210	2G
Teclast	Ti Cool	128M
Teclast	Ti Cool	256M
Teclast	Ti Cool	512M
Teclast	Ti Cool	1G
Teclast	Ti Cool	2G

Appendix C Compatible CD/DVD Burner List

NOTE: upgrade the DVR firmware to latest version to ensure the accuracy of the table below. And you can use the USB cable with the model recommended to set USB burner.

Manufacturer	Model	Interface	Type
Sony	DRU-835A	IDE	DVD-RW
Sony	DW-Q120A	IDE	DVD-RW
Sony	DW-G120A	IDE	DVD-RW
Sony	CRX-230AE	IDE	CD-RW
Sony	CRX-320A	IDE	CD-RW
Sony	CRX-225E	IDE	CD-RW
BenQ	DW2000	IDE	DVD-RW
BenQ	DW1670	IDE	DVD-RW
BenQ	DW1650	IDE	DVD-RW
BenQ	DW1640	IDE	DVD-RW
BenQ	5232W	IDE	CD-RW
Samsung	TS-H652M	IDE	DVD-RW
LG	GH20NS10	SATA	DVD-RW
PIONEER	DVR-212D	SATA	DVD-RW
Sony	AW-G170S	SATA	DVD-RW
Samsung	TS-H653A	SATA	DVD-RW
Panasonic	SW-9588-C	SATA	DVD-RW
Sony	DRX-S50U	USB	DVD-RW
BenQ	5232WI	USB	DVD-RW

Appendix D Compatible SATA HDD List

NOTE: upgrade the DVR firmware to latest version to ensure the accuracy of the table below. And SATA HDD should be used for the DVR with SATA port.

Manufacturer	Series	Model	Capacity	Type
Seagate	Barracuda.10	ST3750640AS	750G	SATA
Seagate	Barracuda.10	ST3500630AS	500G	SATA
Seagate	Barracuda.10	ST3400620AS	400G	SATA
Seagate	Barracuda.10	ST3320620AS	320G	SATA
Seagate	Barracuda.10	ST3250620AS	250G	SATA
Seagate	Barracuda.10	ST3250820AS	250G	SATA
Seagate	Barracuda.10	ST3160815AS	160G	SATA
Seagate	Barracuda.10	ST380815AS	80G	SATA
Seagate	Barracuda.9	ST3160811AS	160G	SATA
Seagate	Barracuda.9	ST3120811AS	120G	SATA
Seagate	Barracuda.9	ST380811AS	80	SATA
Seagate	Barracuda.9	ST380211AS	80G	SATA
Seagate	Barracuda.11	ST3750330AS	750G	SATA
Seagate	Barracuda.11	ST3500320AS	500G	SATA
Hitachi	Deskstar	SV3.5 Series	160/250/500/ 750/1TB	SATA
Maxtor	DiamondMax 20	STM3320820AS	320G	SATA
Maxtor	DiamondMax 20	STM3250820AS	250G	SATA
Maxtor	DiamondMax 21	STM3160211AS	160G	SATA
Maxtor	DiamondMax 21	STM380211AS	80G	SATA
Maxtor	DiamondMax 21	STM340211AS	40G	SATA
Western Digital	Caviar SE	WD3200JD	320G	SATA
Western Digital	Caviar SE	WD3000JD	300G	SATA
Western Digital	Caviar SE	WD2500JS	250G	SATA
Western Digital	Caviar SE	WD2000JD	200G	SATA
Western Digital	Caviar SE	WD1600JD	160G	SATA
Western Digital	Caviar SE	WD1600JS	160G	SATA
Western Digital	Caviar SE	WD1200JS	120G	SATA
Western Digital	Caviar SE	WD800JD	80G	SATA
Western Digital	Caviar	WD1600AABS	160G	SATA
Western Digital	Caviar	WD800BD	80G	SATA
Western Digital	Caviar SE16	WD7500KS	750G	SATA
Western Digital	Caviar SE16	WD5000KS	500G	SATA
Western Digital	Caviar SE16	WD4000KD	400G	SATA
Western Digital	Caviar SE16	WD3200KS	320G	SATA
Western Digital	Caviar SE16	WD2500KS	250G	SATA

